TIBCO ActiveMatrix BusinessWorks™

Release Notes

Version 5.16.1 | February 2025

Document Updated: March 2025

Contents

New Features

The following features have been added since the last release of TIBCO ActiveMatrix BusinessWorks™.

Long Term Support

TIBCO ActiveMatrix BusinessWorks™ 5.16.1 is a Long Term Support Release. For information about the ActiveMatrix BusinessWorks™ LTS Support, see TIBCO LTS Policy.

Product Activation

Customers must activate this release with a license as part of an installation or upgrade. The release will not function unless it is activated with a license.

Generate a license to activate this product within the TIBCO Software Download site. Only customers with an active entitlement to this release can generate a license.

Activate TIBCO products by using TIBCO® Activation Service software, which you can download from the TIBCO Software Download site.

To learn how to configure this product for activation, visit: https://docs.tibco.com/products/tibco-activation-service-1-0-0.

Support for OpenTelemetry Metrics

This release adds support for OpenTelemetry Metrics. For more information, see "OpenTelemetry Metrics" in *TIBCO ActiveMatrix BusinessWorks™ Concepts*.

Support for Messaging System

Support is added for AMQ 7.12.x

Database support

Support is added for Oracle Database 23ai

Release 5.16.0

The following features have been added in this release:

- **Support for OpenTelemetry Tracing**

  Support for OpenTelemetry Tracing through ActiveMatrix BusinessWorks™ engine has been added in this release.

- **Support SSL for TCP palette**

  ActiveMatrix BusinessWorks now supports SSL for TCP palette.

- **Support for Java 17**

  ActiveMatrix BusinessWorks now supports Java 17.

- **Support for Apache Tomcat**

  Apache Tomcat 9.0.95 support is added in this release.

- **Dependency Checks**

  Following are the required dependency checks for TIBCO ActiveMatrix BusinessWorks 5.16.0:

  - TIBCO Runtime Agent 5.13.0
  - TIBCO Rendezvous 8.7.0

- **Database Support**

  PostgreSQL 16.x

Release 5.15.1

The following features have been added in this release:

- **Support for EMS version 8.7.x**

  Support has been added for EMS 8.7.x version.

- **Support for Apache Tomcat**

  Apache Tomcat 9.0.82 support is added in this release.

- **Database Support**

  MySQL 8.x

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- **Support for Java 11**

  TIBCO ActiveMatrix BusinessWorks™ now supports Java 11.

- **Bouncy Castle support**

  Support is added for Bouncy Castle as a security provider in this release.

- **Capture stdout and stderr entries in the application log**

  Ability to see the specific error messages in the application log file as well as on the console without making any explicit changes in the `log4j.xml` file.

  The error message along with the stack trace is successfully recorded in the log file.

- **Support for IMAP protocol in the Receive Mail activity.**

  The new **Protocol** drop-down list is added on the **General** tab of the **Receive Mail** activity.

  The drop-down list has the following options:

  - POP3

  - IMAP

  For more information, see "Receive Mail" in *TIBCO ActiveMatrix BusinessWorks™ Palette Reference*.

- **Support for OAuth 2.0 Authentication in the Receive Mail activity.**

  The **Authentication** drop-down list is available when you select the **IMAP** option in the **Protocol** drop-down list on the **General** tab of the **Receive Mail** activity.

  The following options are available in the **Authentication** drop-down list:

  - Basic Authentication

  - OAuth 2.0

  For more information, see "Receive Mail" in *TIBCO ActiveMatrix BusinessWorks™ Palette Reference*.

- **Support for OAuth 2.0 Authentication in the Send Mail activity**

  The new **Authentication Type** drop-down list is displayed when you select the **Authenticate** check box on the **General** tab of the **Send Mail** activity.

  The following options are available in the **AuthenticationType** drop-down list:

- Basic Authentication

- OAuth 2.0

For more information, see "Send Mail" in *TIBCO ActiveMatrix BusinessWorks™ Palette Reference*.

- **Dependency Checks**

Following are the required dependency checks for ActiveMatrix BusinessWorks™ 5.15.0:

  - TIBCO Runtime Agent 5.12.0

  - TIBCO Rendezvous 8.5.1

- **Platform Support**

  - Microsoft Windows Server 2016 64-bit on x86-64

  - Red Hat Enterprise Linux 7.x 64 bit

  - Oracle Enterprise Linux 7.x 64 bit

  - Novell SUSE Linux Enterprise Server 12.x 64-bit on x86-64

> ⚠️ **Warning:** It is not recommended to use Microsoft Windows 10 for production.

- **Database Support**

  - IBM DB2 11.5

  - IBM DB2 for z/OS 11.1.x and 12.x

Changes in Functionality

The following functionality and features have been changed in this release of TIBCO ActiveMatrix BusinessWorks™.

Release 5.16.1

Changes in SSL Implementation when HTTP Receiver server type is Tomcat

Earlier, TIBCrypt was performing the certificate chain validation. In this process, along with client certificates, it was also verifying intermediate certificates and root certificates. These were expected to be present in the truststore. That means, you must explicitly trust the entire certificate chain in order to verify them.

With this release of ActiveMatrix BusinessWorks 5.16.1, instead of TIBCrypt, Java is performing the client certificate validation. Java does not need all the certificates in the client certificate chain to be present in the truststore. Trusting any anchor among the certificate chain is sufficient to trust the entire chain.

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There are no changes in functionality in this release.

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- Support for Progress DataDirect driver

  TIBCO ActiveMatrix BusinessWorks now supports JDBC applications created using Progress DataDirect driver procured with a valid license key. For more information, see "JDBC Connection" in TIBCO ActiveMatrix BusinessWorks Palette Reference.

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There are no changes in functionality in this release.

Deprecated and Removed Features

The following features have been deprecated or removed as of this release of TIBCO ActiveMatrix BusinessWorks™.

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Deprecated Features

No features are deprecated in this release.

Removed Features

The following features are removed in this release.

- Support for RedHat Enterprise Linux 7.x
- Support for Oracle Linux 7.x
- Support for Windows Server 2019

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Deprecated Features

- The following database versions are no longer supported:
  - Microsoft SQL Server 2014
  - PostgreSQL 11.x and 12.x
- The following application server is no longer supported
  - JBoss application server 7.1.1.

- ○ Oracle Weblogic server 12.1.1
- The following messaging systems are no longer supported

  IBM WebSphere MQ 8.0.x

Removed Features

No features are removed in this release.

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Deprecated Features

The following database versions are no longer supported:

- MariaDB 10.3.x

- Microsoft SQL Server 2012 and 2012 R2

- Oracle Database 12c 12.1.x, 18c 18.x

- PostgreSQL 10.x

Removed Features

Support for TIBCO® Database Drivers SupplementTM has been removed from this release of TIBCO ActiveMatrix BusinessWorks. In order to continue using Progress DataDirect drivers, procure license for the same.

To migrate your existing applications using TIBCO® Database Drivers SupplementTM to either vendor supplied native drivers or Progress DataDirect drivers, see "Migrating from TIBCO Database Drivers Supplement configured application to native driver" or "Migrating from TIBCO Database Drivers Supplement configured application to Progress DataDirect Driver" sections in TIBCO ActiveMatrix BusinessWorks Palette Reference

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Deprecated Features

No features are deprecated in this release.

Removed Features

No features are removed in this release.

Migration and Compatibility

The following information provides migration procedures and a compatibility matrix for this release of TIBCO ActiveMatrix BusinessWorks™.

Migrating from Release 5.16.0

Projects created in any 5.x release can be opened and saved in this release. Projects from Release 2.x must be migrated to Release 5.x before they can be used. TIBCO Designer has a tab labeled Administration on the startup menu that allows you to convert `.dat` files containing projects from Release 2.x to the current format. You can also use the `bw20migrate.exe` utility to perform batch conversions of projects. Once a project created in Release 2.x is migrated to release 5.x, you can open the project in this release.

Migrating projects is described in *TIBCO ActiveEnterprise Features, Migration, and Compatibility* in the TIBCO Runtime Agent documentation set.

It is recommended to take manual back up of existing BW 5.16.0 environment before installing 5.16.1

Closed Issues

- [General Fixes](#)

- [File Palette](#)

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Closed in Release	Change Request ID	Summary

General Fixes

Closed in Release	Change Request ID	Summary
5.16.1	BW-20300	ActiveMatrix BusinessWorks 5.16.1 now supports AMQ 7.12.
5.16.1	BW-20095	The BC Palette activities do not work with EMS when you use Open Telemetry feature with ActiveMatrix BusinessWorks 5.15.1 HF2.
5.16.0	BW-19963	If two different certificates exist in the trusted store from the same issuer, only one certificate is loaded when using mutual authentication.
5.16.0	BW-19901	A signature validation fails if the `<wsse:KeyIdentifier>` element is used to specify reference to the signer certificate. Set the

Closed in Release	Change Request ID	Summary
		`java.property.bw.plugin.soap.security.lessRestrictive` property to `true`. The default value of the property is `false`.
5.15.1	BW-19348	Configuration information in log4j2.properties file has been updated.
5.15.0	BW-17994	When a BWEngine is deactivated and if in-flight jobs are inside a transaction group, the in-flight jobs are abandoned without commit or rollback and keep the locks on a database.
		Add the following property only in the secondary process engine.tra file when primary and secondary engines are in the FT mode.
		`bw.plugin.jdbc.connection.forceReleaseConnectionOnSecondaryEngine=true`
5.15.0	BW-17871	ActiveMatrix BusinessWorks fails to invoke activities of TIBCO ActiveMatrix Adapter for WebSphere MQ and generates NullPointerException intermittently.

File Palette

Closed in Release	Change Request ID	Summary
5.16.1	BW-20163	The **Rename File** activity throws an exception even when the rename operation is successful.
5.15.0	BW-18372	The **Timer** activity is triggered at irregular intervals when it is configured with the **File Poller** activity, and the **File Poller** activity is configured to poll a huge directory.

FTP Palette

Closed in Release	Change Request ID	Summary
5.15.1	BW-19349	FTP activities add an extra CRLF to the QUIT command.
5.15.0	BW-18358	The FTP connection stays in the LISTEN state even after the job is

Closed in Release	Change Request ID	Summary
		complete when you execute an **FTP** activity with the Active mode FTP connection.

General Activities Palette

Closed in Release	Change Request ID	Summary
5.16.0	BW-19976	The **Get Shared Variable** activity does not respond inside the critical section groups when using MS SQL Server as the engine database.
5.15.1	BW-19352	The **Rethrow** activity doesn't rethrow the custom exceptions generated in a subprocess to the parent process. This has been fixed. Set the `com.tibco.bw.enableCustomErrorOutput` property to `true`. The default value is `false`.

HTTP Palette

Closed in Release	Change Request ID	Summary
5.16.0	BW-19973	The security context is missing in the HTTP Receiver activity's output when the server type is HTTPComponent.
5.16.0	BW-19965	The **Send HTTP Request** activity fails with the exception `java.net.URISyntaxException: Illegal character in query at index xxx` when there are special characters in the query string.
5.16.0	BW-19910	Tomcat HTTP server does not add all the trusted certificates from the trusted certificates folder to the truststore that it creates. Set the `com.tibco.bw.allowCertificatesWithSameSerialNumbers` property to `true`.
5.16.0	BW-19909	An HTTP server with client authentication fails when it is deployed as the remote repository
5.16.0	BW-19908	The **Send HTTP Request** activity shows different behavior for the QueryString Parameter in ActiveMatrix BusinessWorks versions 5.13.x and 5.15.x.

Closed in Release	Change Request ID	Summary
5.16.0	BW-19905	Tomcat HTTP server does not load all the trusted certificates. Set the `com.tibco.bw.allowCertificatesWithSameSerialNumbers` property to `true`.
5.16.0	BW-19902	An invocation fails when an input string in the **Send HTTP Request** activity is already url-encoded. A new property `bw.plugin.http.client.urlEncodeQueryString` is added. Provide the value of the property as special characters that don't require encoding inside the square bracket. You can specify multiple characters separated by comma. The default value is false. Set the property to true to execute the default behavior. For example, if you don't want to encode '%' and '+', provide the characters in the property as follows: `java.property.bw.plugin.http.client.urlEncodeQueryString = [%,+]`.
5.15.1	BW-19355	ActiveMatrix BusinessWorks provisioning to log the inbound and outbound Tomcat request-response has been fixed.
5.15.1	BW-19345	With the client authentication enabled, ActiveMatrix BusinessWorks HTTP server can now load the certificates present in the trust store.
5.15.0	BW-18378	Overriding the host header value using DynamicHeaders input for the **Send HTTP Request** activity does not work.
5.15.0	BW-18375	ActiveMatrix BusinessWorks can not close ports after processing HTTP requests, and generates an exception when you configure ActiveMatrix BusinessWorks with HTTPComponent and SSL.
5.15.0	BW-18374	The CPU utilization is high when an application has the **Send HTTP Request** activity.
5.15.0	BW-18373	The **Send HTTP Request** activity fails when the port is not specified in

Closed in Release	Change Request ID	Summary
		the URL of the response location header, and the **Accept Redirects** check box is selected on the **Configuration** tab of the **Send HTTP Request** activity.
5.15.0	BW-18367	The deadlock is observed at the **Send HTTP Response** activity when the HTTP receiver had a server type as HTTPComponent.
5.15.0	BW-18365	The HTTP client thread waits for a response even when the **Send HTTP Request** activity is timed out.
5.15.0	BW-18364	The performance is degraded as the **Send HTTP Request** activity takes more time when invoking services over SSL repeatedly.
5.15.0	BW-18362	The HTTP requests fail when having more than one HTTP client activity in the same application.
5.15.0	BW-18356	A memory leak is observed for open files on Linux or file handles on Windows when the **HTTP Component** shared resource is used with SSL.
5.15.0	BW-18325	Applications with the **HTTP Receiver** activity stop receiving requests under load when the Flow Limit value is greater than zero.
5.15.0	BW-18322	The CPU usage is high when a server type is HTTPComponent.
5.15.0	BW-18318	The SOAP Fault in 1.1 format is returned even if you select the SOAP version as 1.2 in the SOAP over JMS configuration in the Service palette when there is an error in the Header field.
5.15.0	BW-18317	The Content Length header is not set when the **Send HTTP Request** activity is configured to send a message with MIME attachments and the Transfer-Encoding header is set to chunked. To resolve this issue, set the newly introduced property

Closed in Release	Change Request ID	Summary
		`bw.plugin.http.client.enableContentLengthHeader` to `true` in the .tra file.
5.15.0	BW-18316	The **Send HTTP Request** activity sets the incorrect Host value in the header when the 301 status response is received.
5.15.0	BW-18302	The Proxy authentication does not work when the endpoint URL is set through proxy as HTTPS, and the proxy is configured with BASIC authentication.
5.15.0	BW-18301	The HTTPS connections are not reused when the `bw.plugin.http.client.usePersistentConnectionManagerForSSL` property is set to `true`.
5.15.0	BW-17885	TIBCO ActiveMatrix BusinessWorks returns the default error response which includes the server information when an invalid or bad request is received. To resolve this issue, set the newly introduced property `bw.plugin.http.suppressHttpResponseHeader` to `true` in the .tra file.
5.15.0	BW-17884	The **Send HTTP Request** activity with multiple Cookie headers in the input sends only one Cookie header in the outbound request.
5.15.0	BW-17880	The **Send HTTP Request** activity fails to process the HTTP response with the status code `204`.
5.15.0	BW-17879	HTTP clients add an Authorization header instead of a Proxy-Authorization header in the outbound request when the HTTP client is configured with a Proxy Configuration having Basic Authentication.
5.15.0	BW-17878	The URL Encoding in the QueryString value is not preserved for the **Send HTTP Request** activity.

Closed in Release	Change Request ID	Summary
5.15.0	BW-17874	The PostData element of the **HTTP Receiver** activity is null for the POST method.

Java Palette

5.15.1	BW-19354	A fix has been provided to compile the input class while using Java 11 through **Java Custom Functions** activity.

JDBC Palette

5.15.0	BW-18370	The **JDBC Call Procedure** activity fails for procedures and functions that return REF CURSOR.
5.15.0	BW-18369	The **JDBC Call Procedure** activity that returns SYS_REFCURSOR failed.
5.15.0	BW-18321	The connection issue with the SQL server when using DataDirect JDBC Driver has been fixed.

JMS Palette

5.15.0	BW-17883	The **SOAP Request Reply** activity with JMS transport and destination type as **Topic** fails with the following exception: `JMSIOException: Could not create a reply receiver.`

Mail Palette

5.15.1	BW-19346	The `com.tibco.bw.plugin.mail.oauth.bufferintervalfornewaccesstoken` property is added to improvise the OAuth 2.0 support with the **Receive Mail** activity. The default value is 300 seconds. The new access token is fetched 05 minutes before the existing token expires in time automatically. You can configure and override as per

Closed in Release	Change Request ID	Summary
		the requirement. **Note:** It is recommended not to set this value less than 30 second.
5.15.0	BW-17875	The **Send Mail** activity ignores the `mail.smtp.timeout` system property.
5.15.0	BW-17870	The **Receive Mail** activity displays only the first part of a message with content type as mutipart/alternative.

Policy Palette

Closed in Release	Change Request ID	Summary
5.15.0	BW-18359	The UsernameToken authentication using Custom Password Lookup feature does not work when the password in the inbound request is of type PasswordDigest.
5.15.0	BW-18300	The UsernameToken authentication using Custom Password Lookup feature does not work when the password in the inbound request is of type PasswordDigest.
5.15.0	BW-17877	SSL invocation from TIBCO ActiveMatrix BusinessWorks fails when one of the certificates in the server certificate chain does not contain the RDN CN in the Subject DN, and the **Verify Host Name** is unselected in the SSL Configuration.
5.15.0	BW-17869	Inbound Security Policy processing fails when the timestamp does not contain the Expires element.
5.15.0	BW-17868	The UsernameToken authentication does not work for LDAP users.

Parse Palette

Closed in Release	Change Request ID	Summary
5.15.0	BW-	The **Parse Data** activity does not parse a column that contains both a

Closed in Release	Change Request ID	Summary
	18366	double quote and a column separator.
5.15.0	BW-18312	The **Parse Data** activity can not parse the part of a field containing double quotes and generates incorrect results.

Rendezvous Palette

5.15.0	BW-17873	ActiveMatrix BusinessWorks creates more selective listeners instead of creating generic listeners _RV.>

SOAP Palette

5.16.1	BW-20162	For the Soap client and server process with JMS transport scenario, the client and server process traces are displayed under different spans.
5.16.0	BW-19975	Validations are added when multiple headers use the same part name values in the **SOAP Request Reply** activity.
5.16.0	BW-19937	In a few scenarios, the content type header value from the MIME type disappears when using **SOAP Event Source** activity's output.
5.16.0	BW-19911	The Content-transfer-encoding header is not present in the SOAP response. Set the `com.tibco.plugin.soap.keepTransferEncodingHeader` property to `true` to add the header. By default, the property value is `false`.
5.15.0	BW-18383	The **SOAP Request Reply** activity does not work when you configure the activity with HTTP BASIC authentication and configure the proxy with BASIC authentication.
5.15.0	BW-18381	The HTTP transport headers are not available in the output of the **SOAP Request Reply** activity when the invocation is over SSL.

Closed in Release	Change Request ID	Summary
5.15.0	BW-18377	The SSLContext is initialized even if the invocation is not over SSL when you set the HTTP Authentication of the **SOAP Request Reply** activity to BASIC.
5.15.0	BW-18360	Content-Length header value in a SOAP MTOM request is incorrect.
5.15.0	BW-17881	The Content-transfer-encoding and Content-id headers are missing in the MTOM requests.

Known Issues

The tables in this section list known issues in this release. The information is organized on a palette basis.

- General
- ActiveEnterprise Adapter Palette
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- Error Transition
- File Palette
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General

Summary (BW-19849): For Soap-WSS scenario, if you select the **Confidentiality** check box on inbound or outbound Security policy, the following error is displayed: `NoSuchMethodError`.

Workaround: None.

Summary (BW-15514): Occasionally, the ActiveMatrix BusinessWorks engine does not start on HP-IA platform in TIBCO Administrator.

Workaround: Open `application.tra` and update `java.thread.stack.size=256K` to `java.thread.stack.size=512K`.

Summary (BW-13586): There are some spurious paths getting added in the `.tra` file which do not have any impact.

Workaround: None or remove them manually.

Summary (BW-13398): "AMX Endpoint" is visible while configuring the endpoint type in Service Resource and Partner Link Configuration.

Workaround: Use "AMX Endpoint" only when working with ActiveMatrix BusinessWorks Service Engine in the TIBCO ActiveMatrix environment.

MimeParts require Content-Type header for the "unknown" MimeTypes (1-7TLPRZ): Currently the MimeParts require Content-Type header for the "unknown" MimeTypes. This is incorrect according to RFC 822 and RFC 1341 as MimeParts do not require any headers.

Workaround: None.

ActiveMatrix BusinessWorks not using the provided credentials (Username/Password) when JNDI Lookup is configured through a LDAP connection (1-97H368): When a JNDI Lookup is configured through a LDAP connection with the connection factory objects stored in LDAP, the LDAP/JNDI credentials used to connect to EMS instance result in a connection failure.

Workaround: None

NullPointer error when a special character is used in the search string in TIBCO Designer console (1-9CDYH8): A NullPointer exception is thrown, when a hyphen or an underscore character is used in the search string for the 'filename' field in the **Configuration** tab of the **File Poller** activity.

Workaround: None.

Summary (BW-8803): TIBCO Installation Manager fails to open on the Linux platform after TIBCO Runtime Agent version 5.5.4 and any version TIBCO ActiveMatrix BusinessWorks are installed.

Workaround: Use the following syntax to launch TIBCO Installation Manager using a different JRE:

```
$ ./TIBCOIntsallationManager -is:javahome JRE_HOME
```

Output data invalid error with TIBCO Rendezvous 8.1 (1-8W890J):   On UNIX, when TIBCO ActiveMatrix BusinessWorks version is run with TIBCO Rendezvous 8.1, the `following` error is displayed: "`Output data invalid`".

Workaround: Edit the `CLASSPATH` in the `bwengine.tra` file to put the *RV_ HOME*/lib/tibrvj.jar before *RV_HOME*/lib in the `CLASSPATH`.

Summary (BW-7563):   The **BW Processes** tab in TIBCO Administrator does not reflect the rebranding of the product to ActiveMatrix BusinessWorks.

Workaround: None. The tab will continue to be called "BW Processes".

Validation of a schema file fails when the schema file imports other schema files (1-79SX64):   While importing schemas using the Schema Importer tool, a new location with URL such as `C:\`*folder_name*`\schema.xsd` is created and the schemas are imported. However, validating the schema file containing the xsd:include fails with a syntactic error saying the attribute 'SchemaLocation' is required.

Workaround: Provide the URL for the schema.xsd file as `http://server:port/`*folder_ name*`>/schema.xsd`

Multiple WSDL message references in a schema (1-6ROND3):   Currently, you can create an in-line schema in an Editor tab (for example, on the Output Editor tab of the Start activity) that has multiple references to WSDL messages. This is not permitted.

Workaround: You can only have one reference to a WSDL message in an Editor schema and

it must be at the root level of the schema. Do not create multiple elements in a schema of type WSDL Message. A future version of TIBCO ActiveMatrix BusinessWorks will not allow this type of schema to be created.

XPath Formula Builder: On Windows platforms, the XPath Formula Builder dialog has an X icon in the top right corner that dismisses the dialog. On UNIX platforms, this icon does not appear.

Workaround: To close the XPath Formula Builder dialog on UNIX systems, either click the XPath Formula Builder button (the pencil icon) in the Input tab of the activity (this button toggles the display of the dialog) or use the keyboard shortcut for dismissing a window in your windowing system. For most UNIX platforms and windowing systems, this keyboard shortcut is Alt-F4.

Using the preceding axis in XSLT: In previous releases, the for-each-group XSLT statement was not available for use. To workaround this, the preceding axis was sometimes used to create the same output. There were performance problems when using the preceding axis that caused unreasonable slowdowns during mapping.

Workaround: The for-each-group statement performs faster than using the preceeding axis. As such, `xsl:for-each-group` should be used in preference to the combination of `xsl:for-each` and the preceding axis to solve the problem more efficiently. Modify your mappings to use for-each-group.

The Stop Button in Test Mode: In some situations, this button may not stop the process immediately because ActiveMatrix BusinessWorks may be waiting for the current operation to be completed.

For example, if the current activity is **FTP Put** and you are attempting to place a very large file on the remote server, the process engine will not exit test mode until the FTP command has completed, failed, or a timeout has been reached.

Workaround: None.

Optional boolean datatype mapped to a Render XML activity must be specified (1-9ARJ0V): If a boolean datatype in a WSDL is mapped to a Render XML activity and the cardinality of the boolean datatype is optional, then the value of the boolean datatype must be specified. An exception is thrown if the value is not specified.

Workaround: None.

Test Mode Error: If you attempt to test a process where an **XML Render** activity has not specified any input, you will receive the "Unable to reparse source view error".

Workaround: The cause of this error may not be clear when you receive it. Check any **XML Render** activities and make sure the input mappings are specified.

Deployment of multiple engines: The current version of TIBCO Administrator does not allow you to specify different values for global variables for each engine in a load-balancing group. For example, you may have multiple engines executing the same process definition that starts a process when a new RVCMQ message is received. For each of these engines, you cannot specify a different value for global variables such as Worker Weight or Scheduler Weight in the current TIBCO Administrator interface.

Workaround: If you define a global variable with the Service check box checked (using the Advanced Editor of the global variable tab), TIBCO Administrator creates an entry into the service's `.tra` file like the following:

```
tibco.clientVar.<variableName> = <Value>
```

You can edit this entry in the `.tra` file for the deployed process engine and specify a value for your global variables. This will allow you to specify different values for global variables for each engine in a load-balancing group.

ActiveEnterprise Adapter Palette

Invoking an operation with no "in" parameters: You cannot currently invoke an operation that has no input parameters.

Workaround: None.

AE configuration requires Connection Username and Connection Password (1-A2H5G1): When configuring AE with JMS transport and SSL enabled, a username and password is required for the **Connection Username** and **Connection Password** in the session configuration in the adapter.

Workaround: None.

Summary (BW-8992): EAR created from AE client projects which have a **Publish to Adapter** activity do not have the required AEschemas; as a result, they throw AE metadata loading error when deployed in TIBCO Admin.

Workaround: None.

Summary (BW-8558): When a WSDL file, generated for an adapter in TIBCO Designer, is mapped to a Partner Link Configuration in TIBCO Designer and the TIBCO Designer project is validated, the following error is thrown:

```
[Partner Link Configuration = Partner Link Configuration; Partner Link = name_1].
Partner Link has invalid configuration
```

Workaround: None. The validation error can be ignored if and only if you intend to use the project in the ActiveMatrix environment where you MUST wire the partner reference in the composite.

Summary (BW-7958): Any ActiveMatrix BusinessWorks process with Adapter activities using JMS as a transport and has SSL enabled, fails to initialize.

Workaround: None.

JMS Server crashes: If the JMS server goes down while you are designing and testing your process definition (and your ActiveEnterprise Adapter activities are using the JMS transport), you must restart TIBCO Designer because the connection to the JMS server cannot be refreshed.

Workaround: None.

Publishing messages containing unions with XML message format: You cannot currently publish a message that contains a union when using the XML message format.

Workaround: None.

Association Lists: You cannot use association lists in any custom adapter. While there will be no errors during configuration, you will encounter errors at runtime because association lists are not supported in TIBCO ActiveMatrix BusinessWorks.

Workaround: None.

Ledger File field when using the RVCM transport: TIBCO ActiveMatrix BusinessWorks constructs the default value of the Ledger File field from global variables and the Adapter Service configuration. The value of this field must result in a valid path on the filesystem

where the process is run. It is possible that the default value may not be a valid path.

Workaround: You may need to modify the default value in this field or modify the global variables used in this field to make sure the field results in a valid filesystem path.

EJB Palette

Earlier releases of the TIBCO BusinessWorks EJB Plug-in: The 5.1.x releases of this plug-in will not work with TIBCO BusinessWorks Release 5.2.0.

Workaround: You must upgrade and install the latest release of the plug-in (release 5.2.0) if you wish the plug-in to work with TIBCO BusinessWorks 5.2.0.

WebSphere 5.0.2: The WebSphere EJB components are not fully serializable. Because of this, checkpoints may not completely capture references to EJB Home and Remote objects. Therefore, if a process engine crashes after a checkpoint, the restarted process instance will throw an exception when an EJB Home or EJB Remote activity attempts to call a method on an EJB object created before the checkpoint.

WebLogic 7.0 Service Pack 2: In WebLogic 7.0, the EJB components are not fully serializable. Therefore, checkpoints fail in processes containing EJB Home or EJB Remote activities when using this version of WebLogic.

Workaround: The issue is fixed in WebLogic 8.1. Upgrade to that version, if possible.

WebLogic 7.0 Service Pack 2: There is an InitialContext conflict when using BEA WebLogic Application Server and deploying processes that use activities in both the JMS palette and the EBJ palette (or when using multiple users in activities in the EJB palette).

Workaround: Set the Maximum Connections field in the EJB Connection resource to "0" so that a new InitialContext is created for each lookup operation.

JBoss 3.2.1: For some of the EJB method invocations [for example, calling `getEJBHome` on a remote object], a `jndi.properties` file must be present in the TIBCO BusinessWorks engine classpath, otherwise the following error occurs:

```
EJB application exception occurred. The EJBRemote interface method
[test.bw.ejb.stateLess.Test1.getEJBHome] raised exception
[java.lang.reflect.UndeclaredThrowableException].
java.lang.reflect.UndeclaredThrowableException
```

```
      at com.tibco.plugin.ejb.EJBRemoteActivity.for
  (EJBRemoteActivity.java:143)
```

Workaround: Create the appropriate jndi.properties file and place it into the engine CLASSPATH. This is most easily done by editing `bwengine.tra` before starting TIBCO Designer or before deploying your project. See the documentation for TIBCO Administrator for more information about `.tra` files and deploying projects. Sample `jndi.properties` files are available in the JBoss3.2.1 installation.

Error Transition

Error transitions in parallel tracks: Currently, the `$_error` process data produced by an error transition is global to the process.

This means the result of `$_error` may be unpredictable if there are error transitions in two or more parallel tracks.

Workaround: Use a group to isolate the tracks with error transitions from each other.

File Palette

Warning messages on console when File Poller activity is run (1-8RRUNG): When a project containing the **File Poller** activity is run with ActiveMatrix BusinessWorks™ version 5.6.x, the following warning messages are seen on the console:

```
Warn [BW_Core] Duplicate message map entry for errorRole.BW_Plugin.BW-FILE-100009
```

```
Warn [BW_Core] Duplicate message map entry for errorRole.BW_Plugin.BW-FILE-100018
```

Workaround: None. These warning messages are harmless and are shown on the console if two classes attempt to load the same message bundle.

FTP Palette

Summary (BW-6461) Implicit Mode for FTP over SSL (1-70DCEV): This is not supported.

Workaround: Only explicit mode is supported.

Summary (BW-6391): Only the **FTP PUT** and **FTP GET** activities work properly when using FTP activities to access an FTP server outside of a firewall (using the Firewall and Proxy fields

on the FTP Connection resource). No other FTP activities can be used to access an FTP server outside of a firewall.

Workaround: This will be fixed in a future release of ActiveMatrix BusinessWorks™.

General Activities Palette

Summary (BW-7876): The **Wait Notify** activity does not support the IBM DB2 database.

Workaround: None.

Summary (BW-6758): If you create a schema for a **Shared Variable** resource and then attempt to set its initial value, the schema sometimes does not appear in the dialog to set the initial value.

Workaround: Select a different resource, and then return to the Shared Variable resource, the schema now appears in the dialog to set the variable's initial value.

Summary (BW-5081): If you change the icon for a `Call Process` resource and apply the change, it is not possible to undo the change.

Workaround: Delete the `Call Process` and add a new one.

 Summary (BW-4953): The **Call Process** activity, in debug mode, handles the name of the process to be called in a case insensitive manner. However, if the process name differs in case from the actual process name, the **Call Process** activity returns an error when deployed and run as the process name is handled in a case-sensitive manner.

Workaround: Use the resource picker to select the process to be called.

HTTP Palette

Summary (BW-14459): Writing large attachments with serverType selected in the HttpConnection is 'HttpComponent', throws an exception.

Workaround: None.

Summary (BW-9392): The reason phrase field for the **Send HTTP Request** activity is empty if the HTTP server process contains a custom status code and reason phrase in the **status Line** field of the **Send HTTP Response** activity's Input schema. This is observed when you migrate from TIBCO Runtime Agent 5.6.0 to 5.6.1.

Note that this issue is specific to the Tomcat server and is not observed when using HTTPComponents.

Workaround: None.

Summary (BW-8284): When a project containing any activity from the HTTP Palette is run with TIBCO ActiveMatrix BusinessWorks version 5.6.x, the following warning messages are seen on the console:

```
Warn [BW_Core] Duplicate message map entry for errorRole.BW_Plugin.BW-HTTP-100118

Warn [BW_Core] Duplicate message map entry for errorRole.BW_Plugin.BW-HTTP-100206
```

Workaround: None.These warning messages are harmless and are shown on the console if two classes attempt to load the same message bundle.

Summary (BW-7390): When the hostname is anything other than the `localhost`, then TIBCO BusinessWorks considers the machine as a multi home environment and considers default host as null.

Workaround: Set the `bw.plugin.http.server.defaultHost` property in `bwengine.tra` file to the same value as has been set in the host field of HTTP Shared Connection for default host.

Separating multiple name/value pairs in cookies (1-7V7K10): The convention to separate multiple name-value pairs in the same cookie element is typically a semi-colon (;), but TIBCO ActiveMatrix BusinessWorks uses a comma (,).

Workaround: Use commas to separate multiple name/value pairs in the same Cookie header element.

Summary (BW-6180): The `mimeHeaders` element of Send HTTP Request can not contain any double byte characters.

Workaround: None.

Migrated projects that specify the HTTPVersion input element: The Send HTTP Request activity in previous releases of TIBCO BusinessWorks had an input element named HTTPVersion. This input element did not throw an exception if an invalid HTTP version was specified. This field is now deprecated and no longer appears in the input of Send HTTP

Request activities. However, for migrated projects, this input element will appear, and it will still not throw an error if an invalid version is supplied.

Workaround: Remove the HTTPVersion from your activity's input schema in any migrated projects. It is not needed.

Accept Redirects field on Send HTTP Request: When this field is checked, if the remote server sends the redirection status code (3xx), the request is automatically redirected, if the remote host redirects the request to the same host and port. Currently, redirecting to a different host or a different port on the same host is not permitted.

Workaround: If the remote host attempts to redirect the request to a different host and/or port, you must handle this in your process definition logic instead of expecting automatic redirection.

Summary: When we decode the escaped characters of the Request URI of an incoming HTTP GET request, we always use UTF-8.

Workaround: None.

Summary: When we deserialize an incoming HTTP request, we do not properly use the encoding specified in the Content-Type header.

Workaround: None.

Summary: When the Content-Type of an HTTP POST request that sends parameters is not specified, we do not default to application/x-www-form-urlencoded.

Workaround: The user will have to specify the Content-Type and not rely on the default value.

Summary: TIBCO ActiveMatrix BusinessWorks does not perform key store validation. i.e. expired keys.

Workaround:

- TIBCO ActiveMatrix BusinessWorks validates the certificate when user imports it, but if certificate expires after that, it becomes an invalid certificate and TIBCO ActiveMatrix BusinessWorks does not trust it.

- The key store password must be the same as the keys inside it.

- TIBCO ActiveMatrix BusinessWorks does not encourage the use of self-signed

certificates. If a self-signed certificate is used, TIBCO ActiveMatrix BusinessWorks assumes it is coming from a trusted trading partner.

- In this release, TIBCO ActiveMatrix BusinessWorks only supports Java key stores. P12 key stores are not currently supported.

Java Palette

Summary (1-8QX10D): In TIBCO Designer, JAVA schema in the project refers to the class included in the jar that is referred by the Alias library. However, the reference to the jar by the JAVA schema is lost when the project is reopened.

Workaround: None.

Summary (BW-7848): When starting the bwengine in bwcontainer, the deployment fails if the JAVA schema resource is used and some activity in this process refers to this JAVA schema.

Workaround: None.

JDBC Palette

Summary (BW-16979): While connecting to Microsoft SQL 2005, the connection fails with the following error message:
```
java.lang.Exception: com.microsoft.sqlserver.jdbc.SQLServerException: SQL Server
did not return a response. The connection has been closed.
```

Workaround: When using Microsoft SQL Server 2005, add
`java.property.com.tibco.security.EntrustLast=true` or `java.property.TIBCO_SECURITY_VENDOR=j2se` in the designer.tra and bwengine.tra files.

Summary (BW-13337): When selecting from the table using not null clause, a
`java.sql.SQLException: Column 'sales_rep_id' not found` exception is encountered by the native driver.

Workaround: Set the property use `OldAliasMetadataBehavior=true` in the JDBC URL

`(jdbc:mysql://<hostname>:<port>/<databasename>?useOldAliasMetadataBehavior=true )`.

Summary (BW-13335): When using MYSQL JDBC Driver, selecting using date FUNCTIONS shows add_month,day_month column values like MjAwMy0wNi0wMQ== etc. with latest MySql Native driver.

Workaround: None. May work with the earlier version.

Summary (BW-8480): Sybase XA Driver (native) is not supported.

Workaround: None.

Summary (1-A1F3YX): Setting the value to explicit Nill in the Oracle Stored Procedures with Object Types throws an exception against Oracle 9i with thin driver.

Workaround: Use Oracle 10g driver.

Summary (1-95VORP): In the DB2 on Z/OS when the SelectCatalog/Package button of the Configuration tab is clicked, the **JDBC Call Procedure** activity does not list the Catalog/Package names.

Workaround: None

Summary (1-8WR8W1): When using `bw.plugin.jdbc.connection.useDatasource` property, the J**DBC Connection** with the Datasource does not set all the properties supported by a driver.

For example, the property `SendStringParametersAsUnicode=false.`

Workaround: None.

Summary (1-8W9FFH): When invoking the Sybase Stored Procedure containing a numeric data type (defined as numeric (30, 0)) as one of its IN/OUT parameter and a number comprising of more than 20 digits as IN parameter, the **JDBC Call Procedure** activity throws the following error:

```
"Arithmetic overflow during implicit conversion of NUMERIC value
'12345678901234567890123456' to a NUMERIC field".
```

Workaround: None.

Summary (BW-8512): When the **JDBC Update** activity inserts a timestamp value with Server Timezone set to "GMT" or "UTC" and the machine local timezone is PST, time is adjusted by an hour.

Workaround: None.

Migration from previous releases: Some activities of the JDBC palette have changed so that some existing 2.x projects may have errors in the migration log. Most of the problems that will

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occur are due to changes in the input schema of the activities and new enforcement rules for SQL statements.

Workaround: See the release notes document of an older release version for a description of the changes in this release to the activities of the JDBC palette. If possible, update your 2.x project to take these changes into account before migrating the project. If you have already migrated to 5.1, alter the migrated activities to account for the new and changed functionality of the activities of this palette.

Migration from previous releases: When migrating projects from previous releases, the JDBC connection information found in the project is used to fetch schema from the database where necessary. If the JDBC connection is unsuccessful during migration, the input or output schemas of JDBC activities may not be available.

Workaround: The runtime values for any global variable substitution is not performed when making the JDBC connection. Therefore, make certain the connection information is correct in the 2.x project before migration. Also, make sure the database is up, running, and reachable when migrating the project. If you open the migrated project in TIBCO BusinessWorks 5.1 and the input or output schemas are not the expected schemas, click the Fetch or Refresh button on the activity's Configuration tab, click Apply, then save the project.

Migration from previous releases: Prior to release 5.x, if a value returned from a table was null, the output element corresponding to that table value was not placed into the output schema for a **JDBC Call Procedure** activity, if the output element was optional. In release 5.x, the element is now placed into the output schema and has `"xsi:nil = true"` to indicate the element is null.

Workaround: To be compatible with this release and future releases, you should surround elements that can be nil with an if statement to determine whether to output the element. Another way to workaround this problem is to set a property in the bwengine.tra file to maintain the behavior of previous releases. The `Config.JDBC.CallProcedure.OutputUseNil` property controls whether elements that are nil are contained in the output. Set the property to `false` to achieve the behavior of previous releases.

Summary (BW-7056): Under certain situations, time out exceptions are not thrown when using stored procedures in an Oracle database. This can sometimes occur if the stored procedure calls Java functions that sleep for some amount of time.

Workaround: Use caution when calling stored procedures that call Java functions that sleep.

Summary (BW-3377) :   When using the jConn or Data Direct 3.3 driver and connecting to a Sybase database, stored procedures that are supposed to return multiple result sets do not return any data.

Workaround: This only occurs when using the jConn or Data Direct 3.3 database drivers and a Sybase database. To avoid this problem, you can either use the `sun.jdbc.odbc.JdbcOdbcDriver` instead or you can add `set nocount on` to your stored procedure definition.

Parameter Types When Calling A Procedure Using the Sybase JConnect Driver: When using the **JDBC Call Procedure** activity with the `com.sybase.jdbc2.jdbc.SybDriver` driver, you may need to update the Parameter Types of in/out parameters before execution.

For example, all ProcedureColumnOut types will initially appear as ProcedureColumnIn. You must manually change these to ProcedureColumnOut. This can either be done by typing or by selecting from the pull-down list of values. Then, apply and save your project before executing the process definition.

Aliases and Sybase: When you use the `tibcosoftwareinc.jdbc.sybase.SybaseDriver` driver to connect to a Sybase database, column alias names are ignored in SQL statements. Instead of the specified alias, the column name is used in the result set schema.

If you are attempting to execute a query that includes a multi-table join and you are trying to select columns with the same name, you must use column name aliases. Because of this issue, these types of queries will not work properly.

Workaround: This is only an issue when using `tibcosoftwareinc.jdbc.sybase.SybaseDriver`. Other drivers work correctly. Either use a different driver or do not use aliases in your SQL statements. A future release of this bundled driver may fix this problem.

Using COUNT(*) in queries: Depending on the JDBC driver you use, the output datatype of COUNT(*) differs. When using Oracle drivers, the output datatype is a float. When using MS SQL Server drivers, the output datatype is an integer.

Select for update statements to Oracle databases: When a **JDBC Query** activity has the SELECT statement with the FOR UPDATE clause for an Oracle database, a "fetch out of sequence" error is returned if the activity is not part of a transaction.

Workaround: Enclose the activity in a transaction group.

Optional Stored Procedure parameters: Optional stored procedure parameters are not supported. If one of the arguments is missing, the standard procedure cannot be executed.

Workaround: Provide a value for all parameters in the **JDBC Call Procedure** activity input. If a parameter does not have a value, specify an explicit nil for the input element.

For Oracle, calling arguments or return values of the PL/SQL types TABLE (now known as indexed-by tables), RESULT SET, RECORD, or BOOLEAN is not supported. For more information, please visit http://otn.oracle.com/tech/java/sqlj_jdbc/htdocs/jdbc_faq.htm

Inserting large BLOBs: If inserting / updating a huge BLOB fails, activity timeout may need to be adjusted to allow sufficient time to finish the operation

Summary: If DML statements are used with **SQL Direct** activity, using 8.x versions of Oracle thin / thick drivers doesn't work in some cases.

Workaround: Upgrade to 9.x drivers. Note that 9.x drivers work with 8.x and 7.x databases, so only the driver must be changed.

Maximum Rows not supported: While working with Oracle stored procedures, the `Maximum Rows` property is not supported by the Oracle thin driver.

Workaround: Use the Data Direct driver included with the release.

Stored procedure custom exceptions: A JDBC Call Procedure activity throws a generic exception for any custom exceptions raised in stored procedures. The exception thrown is driver specific. Below are the error messages thrown for each combination of database and driver:

Data Direct Oracle: JDBC error reported (SQLState = HY000)

Thin Oracle: JDBC error reported (SQLState = 72000)

Data Direct MSSQL: JDBC error reported (SQLState = HY000)

CLOB/BLOB Datatypes: Columns of type CLOB or BLOB can only be used in JDBC activities when you use one of the following drivers in the JDBC Connection resource:

`tibcosoftwareinc.jdbc.oracle.OracleDriver`

`oracle.jdbc.driver.OracleDriver (oci)`

`oracle.jdbc.driver.OracleDriver (thin)`

Manipulating CLOB or BLOB data is not supported with other database drivers.

Summary: The `UnresolvedResultsets` output parameter can be used to utilize the result sets returned by stored procedures. It represents records in return result sets as an XML string. Since the structure of the XML string is unknown at design time and no mapping can be done if the schema is unknown, use the workaround to overcome the problem.

Note: At this time, only stored procedures that always generate a fixed schema can be utilized

Workaround:

Procedure

1. Configure the `Call Procedure` activity.

2. Add a `Write File` activity

3. Configure a `Write File` activity to write a text file, provide a local file name with `.xml` extension.

4. Map unresolved result sets from call activity's output to `textContent` input field in the `Write File` activity.

5. Execute the process definition. Upon successful execution, all records are written to the specified XML file in a predefined format

6. Open the XML file in XML Authority as a schema. XML Authority generates a schema based on the contents of the XML file (or create the schema manually using the structure provided in the XML file)

7. Create a schema definition resource using the newly generated schema.

8. Add a `Parse XML` activity. In the `Configuration` tab, select the newly created schema definition and type `Resultsets` in the `Element` field

9. Map unresolved result sets from the `Call Process` activity's output to the `Parse XML` activity's `xmlString` input field.

Result sets can now be utilized at design time from the output of the `Parse XML` activity.

JMS Palette

Summary (BW-14933): JMS connection does not work with JMS over SSL in TIBCO ActiveMatrix BusinessWorks 5.9.3. The BusinessWorks engine fails to connect to the EMS server and quits.

Workaround: Add the following property in `bwengine.tra`.
`java.property.com.entrust.toolkit.ssl.fragmentblockcipher=false`

Summary (BW-9089): When using the JMS Request Reply activity, a low CPU utilization (about 55%) caused by a large number of thread blocks is observed.

Workaround: None.

Summary (BW-9007): In **Get JMS** activity for Auto, DUPS OK and Transactional Ack modes, a TIMEOUT Exception is encountered occasionally even though the queue contains the messages.

Workaround: Set **prefetch** value for queue to **NONE**.

Summary (BW-8152): **Wait for JMS Queue** activity when tied with Reply to JMS activity in a JMS Transaction group, succeeds in sending the message to the JMS Requestor in a transaction rollback.

Workaround: None

Summary (BW-7476) : The **Get JMS Queue Message** activity does not work as expected when used in a group and with the Sun JMS Queue Message server. When the timeout value for the **Get JMS Queue Message** activity is not specified, the activity consumes all the messages in the queue and waits for new messages. However, the activity does not consume any new messages that arrive on the queue after a time interval.

Workaround: Specify the timeout for the **Get JMS Queue Message** activity before using the activity with Sun JMS Queue Message server.

Summary (BW-6266): Performance can degrade when using a message selector in the **Get JMS Queue Message** activity and different ports have been specified for the Provider URL and JNDI.

Workaround: Make sure the port number specified in the Provider URL and JNDI fields match. Alternatively, use TCP to connect to the JMS server. This will be fixed in a future

version.

JMSProperties Input Elements: For activities that publish messages (for example, JMS Topic Publisher or Reply to JMS Message), the JMSProperties input element is available. If you specify a value for any of the JMSProperties, then save the project, then delete the value for the property, the JMSProperties element does not get properly removed from the project. You will get an invalid attribute error if you attempt to execute the process definition where the property has not been properly deleted.

Workaround: To work around this problem, edit the process definition `.process` file in a text editor and search for `<JMSProperties/>`. Remove this string from the `.process` file, then restart TIBCO Designer. This will be fixed in a future version.

replyToDestination Input Element: Use of the replyToDestination input element in the JMS Topic/Queue Requestor activities does not always result in the expected behavior if more than one process instance specifies the same reply to destination.

Workaround: If you do wish to specify a destination name for reply messages, you should either specify unique reply to destinations for each process instance or use the **JMS Queue Sender** and **JMS Topic Publisher** activities together with the corresponding **Wait for JMS Queue Message** and **Wait for JMS Topic Message** so that the "Wait" activities can use the appropriate key to receive the correct reply message for the process.

Mail Palette

Reading Attachments from Files: When attachments are contained in a file, the file is read using the system default encoding. There is no way to specify the expected encoding of the file's contents.

Workaround: None.

Text Attachments: When a text attachment is sent by the **Send Mail** activity, the attachment appears as `byte[]` when opened in MS Outlook.

Workaround: None.

Receive Mail attachments (Japanese):   When email is received that was sent by Netscape Navigator on a Japanese machine, the content of any attachments is corrupt in the `Receive Mail` activity.

Workaround: None.

Mapper Palette

Summary (BW-9923): Special characters such as "<", ">", "&" are not recognized when specified as input for the mapper fields which accept (xml) strings and throws an error during Run-time. They should be converted to "<" and ">" etc.

Workaround: None.

Design-time validation: The mapper does not support design-time validation of string length constraints. It also does not validate maximum and minimum (inclusive and exclusive) constraints on numbers.

Workaround: None.

Policy Palette

Summary (BW-6828):   An "Invalid system security subject" error is thrown at runtime in the following cases:

- If a BusinessWorks project EAR file contains both SOAP activities and service resources, and the policy is applied only to a SOAP activity that is part of a dynamically called process.

- If all the processes associated with security policy association in a BusinessWorks project are not included in the tester, irrespective of whether the process starter needs it or not.

Workaround: Validate all policy associations before starting the engine. Also, ensure that during deployment configuration all the event sources, service resources, and service agents that have policies applied are not disabled.

Summary (BW-6550):   When you are using JRE 1.5, startup time for the engine is increased for projects that use security policies.

Workaround: JRE 1.5 actually improves performance as the engine continues to run for longer periods, but startup time can increase when using security policies.

Summary (BW-6334):   Under some situations, some requests that have encryption enabled raise an exception.

Workaround: None.

Summary (BW-6312): When resources in the Policy palette are in the project, the engine throws a java.lang.NoSuchFieldException: m_ functions exception upon startup due to Xalan compatibility issues.

Workaround: Ignore the exception, the engine functions properly.

Summary (BW-6158): You can create multiple Security Policy Association resources that apply different policies to the same resource. This is not recommended, but at this time, the product allows this to occur without a warning. At runtime, the first policy encountered will be used for the resource.

Workaround: Do not create multiple Security Policy Association resources that apply to the same SOAP or Service resource. In the future, this condition will not be permitted.

Summary (BW-5838): An exception occurs on messages if you are using `jwsdp1.6` (SUN's API for signing SOAP messages), and you are using the InclusiveNamespaces tag in the canonicalization method.

Workaround: None.

Rendezvous Palette

Summary (BW-14736): While retrieving `TibrvMsgField` from `TibrvMsg` for an unsigned short with value 65535, it gets converted to -1. This causes `XsUnsignedShort` to throw `NumberFormatException`.

Workaround: None.

Summary (BW-8552): On UNIX, the **Send Rendezvous Request** activity failed to send complex data schemas.

Workaround: In the `bwengine.tra` and `designer.tra` files, put `RV_HOME/lib/tibrv.jar` before `RV_HOME/lib` in the `CLASSPATH`.

Summary: Use of the replySubject input element in the **Send Rendezvous Request** activity would not always result in the expected behavior if more than one process instance specified the same reply subject.

Workaround: If you do wish to specify a reply subject, you should either specify unique reply

subjects for each process instance, or you can use the **Publish Rendezvous Message** activity together with the **Wait for Rendezvous Message** activity so that the Wait activity can use the appropriate key to receive the correct reply message for the process.

RMI Palette

Using localhost as the registry server host name: Java does not support more than one registry server running in the same Java VM. If you are using "localhost" as the registry server host name, you may encounter this problem when trying to test process definitions. TIBCO ActiveMatrix BusinessWorks attempts to start the registry server when a test session is initiated in TIBCO Designer. If you attempt to start another test session with a different port number on the same machine (localhost), you will encounter an error when an attempt is made to use the registry server (for example, to execute a RMI Lookup activity).

Workaround: If you must change the port number of the registry server when using the same registry server host name, you must restart the Java VM by closing and restarting TIBCO Designer before starting another test session.

Service Palette

Summary (BW-15504): A design time validation error is not thrown when a service with Doc/Encoded style is created with the message parts defined as elements. However, an error is thrown when you run such a service.

Workaround: None.

Summary (BW-13420): A similar value in the incoming/outgoing SOAP fault messages on the wire for both the fault headers is received, if the WSDL has two fault headers with the same part name.

Workaround: None.

Summary (BW-13403): When one Fault is removed from the Abstract WSDL's operation, it does not rollback that fault in the Fault Headers Soap fault list.

Workaround: None.

Summary (BW-6451): Validation of the Service Resource does not check the following rules (both at design-time and run-time):

- validate that all the message parts are defined using types - for SOAP Encoding

- validate that there is only one part defined using type - for document style services and literal encoding

- validate that all message parts are either defined using types or are all defined using elements

- validate that each part has a unique name in the context of a message

Workaround: None.

Summary (BW-6063):   When folders are created in a project and the project has not yet been saved, the folders do not yet exist in the file system. When referenced folders do not yet exist, the Service resource cannot generate the WSDL file on the WSDL Source tab properly and an exception occurs. The following conditions can cause the exception:

- the parent folder of the Service resource or any folder containing resources that the Service resource depends upon do not exist in the file system.

- the WSDL file that is referenced by the Service resource is located in a folder that does not exist on the file system.

- one of the resources (WSDL/XSD) referenced by the WSDL file that is referenced by the Service resource is located in a folder that does not exist on the file system.

Workaround: Save the project before viewing the WSDL file on the WSDL Source tab.

SOAP Palette

Summary (BW-6802):   The value of `charset=UTF-8` is inconsistent in the Content-type of HTTP Headers for **SOAP Request Reply**, **Send SOAP Fault**, and **HTTP Request Reply** activities. **SOAP Request Reply** accepts the value with quotes, such as "UTF-8", while **Send SOAP Fault** and **HTTP Request Reply** activities accept the value without quotes, such as UTF-8.

Workaround: None

Validate For Deployment and Schemas (1-3Q0GSD):   When you have a number of Schemas (WSDL and XSDs) stored in a directory and the directory is renamed, validate for deployment initially report errors.

Workaround: Shutdown and restart TIBCO Designer and the errors are no longer reported when validating for deployment.

Invoking a Web Service implemented by a process definition   The URL for web services that are implemented by TIBCO BusinessWorks process definitions is derived from the process name and the path to the process within the project. In previous releases, this URL was represented in the WSDL file exactly as it appeared in the project. That is, if there were any spaces or other special characters (for example, &, /, or =), these characters were not altered in the URL. Therefore, a client of the web service would use URL encoding to represent the special characters when requesting the service. This has been changed in release 5.x so that any special characters in the URL are mangled and represented using regular characters.

Workaround   For projects created in release 2.x and migrated to 5.x, you must use the new URL. That is, for SOAP Request Reply activities that call web services implemented by process definitions, refresh the WSDL file that calls the web service. For web clients, retrieve the new WSDL file before calling the web service.

Summary: Headers and faults have limited support for SOAP encoding. For example, the `href` attribute is not supported for fault details or header elements.

Workaround: None.

Reading Attachments from Files: When attachments are contained in a file, the file is read using the system default encoding. There is no way to specify the expected encoding of the file's contents.

Workaround: None. This will be addressed in a future release.

Validate for Deployment Errors: WSDL files using special types for attachments report errors for a missing location attribute when validating for deployment.

Workaround: Ignore the error. The process definition using the WSDL file will execute properly.

TIBCO Designer

Summary: If you place a process definition in a custom palette, save the custom palette, then reopen TIBCO Designer, an error occurs preventing you from reopening TIBCO Designer.

Workaround: Do not place process definitions in custom palettes. Use custom palettes for Generic Adapter Configuration resources or other non-process definition resources. If you

encounter this error, navigate to the location where the custom palettes are stored (this is customizable, but Windows NT, for example, stores these in your `WINNT\Profiles\<user>\.TIBCO\custom_palettes` directory), and delete the custom palette containing the process definition.

TIBCO Designer 5.2 Strict Naming Convention: A stricter naming convention is enforced in this release. The strict naming convention prevents you from renaming an object by changing case and prevents the use of certain characters. The strict naming convention must be turned off if you are opening 5.1.x project in Designer 5.2 that contains characters that are illegal in release 5.2.

Workaround: The `-Dstrictnames` flag is used to enforce or relax the strict naming convention. The flag is set in the `designer.tra` file. The default is `true`.

- If set to `true`, the strict naming convention is enforced. This means you cannot rename an object by changing case. For example, you cannot rename an object from `myobject` to `MyObject`. You also cannot use the following characters in an object name: | / \ " ' : ?.

- If set to `false`, the strict naming convention is not enforced. This means you can rename objects by changing case. You also can use the following characters in an object name: | / \ " ' : ?.

The `-Dstrictnames` flag should be set to `false` when opening a 5.1.3 project in TIBCO Designer 5.2 that contains object names which use the disallowed characters. After opening the project, you should change object names by removing the disallowed characters and reset the `-Dstrictnames` flag to `true`.

See the *TIBCO Designer Release Notes* for more information.

Web Service Wizards

Summary (BW-6231): When using the wizard that creates a WSDL and Service resource, double byte characters are not permitted in the XSD schema names in the input and output specified on the **Start** and **End** activities.

Workaround: None.

Summary (BW-6143): Only processes that have XSD references in the input/output specified on the Start and End activities are supported. The wizards do not support WSDL messages as input or output to a process definition.

Workaround: None.

Summary (BW-6063): When folders are created in a project and the project has not yet been saved, the folders do not exist in the file system. When referenced folders do not yet exist, the Service resource cannot generate the WSDL file on the WSDL Source tab properly and an exception occurs. The following conditions can cause the exception:

— the parent folder of the Service resource or any folder containing resources that the Service resource depends upon do not exist in the file system.

— the WSDL file that is referenced by the Service resource is located in a folder that does not exist on the file system.

— one of the resources (WSDL/XSD) referenced by the WSDL file that is referenced by the Service resource is located in a folder that does not exist on the file system.

Workaround: Save the project before viewing the WSDL file on the WSDL Source tab.

WSIL and UDDI Registry Browser in TIBCO Designer

Summary (BW-2203): Using the UDDI option on the Tools menu to browse http://www.xmethods.net/inspection.wsil does not work properly.

Workaround: None.

WSDL Palette

Summary (BW-7052): Copy and paste options are not available for resources in the WSDL palette.

Workaround: None.

XML Activities Palette

xsl:number function in the Transform XML activity: The `xsl:number` function is not supported in style sheets used by this activity.

Workaround: Do not use the `xsl:number` function.

XML Schemas

Redefine: The `<redefine ...>` mechanism is not supported in XML Schemas. If you use a schema with this mechanism, the `<redefine ...>` is ignored, and if you attempt to validate your project or resources that use the schema, errors will occur.

Workaround: None.

\<include\> tags: "Chameleon" schemas: When one XML Schema (XSD) resource that has a targetNamespace attribute includes a XSD which has no targetNamespace, the element/type/group reference from the including to the included schema in this case will not be resolved and will result in error indications (red highlights) in activities' input and output tabs.

Workaround: None.

\<include\> tags: Include context: Schema A defines component X and includes schema B, which defines component Y. Y's definition references X, even though B does not include A or any other schema that defines X. This pattern is sometimes used as a way of expressing "templates" in XSDs.

This case results in error indications in activities' input and output tabs even if they explicitly reference schema A.

Workaround: None.

QName (qualified name) conflicts: Two XSDs, A and B, both have the same targetNamespace (or no targetNamespace) and both define component X. In that case, they are "mutually exclusive" in the context of the same process definition. For example, you cannot have two XML Parse activities in the same process with one configured to use element X from A and the other using element X from B. This results in error indications in the activities' input and/or output tabs.

There are warnings when this is about to happen (that is, if the user tries to use A's X and B's X from the same inline schema editor). The warnings will be clarified, and a facility for explicitly resolving such QName conflicts at the process definition level will be added in a future release, however the fundamental restriction is currently expected to always be present.

XPath

Numbers: XPath converts all numbers regardless of their datatypes to double. For large positive or negative decimals and integers, there could be a loss of precision.

Workaround: Use a string instead of a number. However, for very small float and double numbers (for example, 1.4E-45), this will not work.

TIBCO ActiveMatrix BusinessWorks is fully compliant with the XPath 1.0 specification for comparing booleans. The resulting behavior is counter-intuitive.

Here is an example for writing expressions comparing boolean data values. Assume this is part of your process data:

```
$MyResult/
   aBooleanValue
```

... so `aBooleanValue` is a boolean inside of the variable `$MyResult`.

The cleanest expression for a boolean condition based on this input is:

```
$MyResult/aBooleanValue = 'true'
```

The expressions:

```
$MyResult/aBooleanValue = true()
boolean($MyResult/aBooleanValue) = true()
string($MyResult/aBooleanValue)=true()
$MyResult/aBooleanValue
```

will, according to the XPath specification, always return true. Specifically:

- In the first two cases the test is if the element `aBooleanValue` exists.

- In the third case, the test for comparing a string to a boolean is if the `length (string)>0`, so this is true for both true and false values.

- The fourth case is equivalent to `boolean($MyResult/aBooleanValue)` and, like the first two, tests for the existence of `aBooleanValue` rather than its string value.

The way to check a boolean in XPath is to check its textual value. This is how the XPath specification defines the behavior.

TIBCO Product Documentation and Support Services

For information about this product, you can read the documentation, contact TIBCO Support, and join TIBCO Community.

How to Access TIBCO Documentation

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

The Product Documentation website is updated frequently and is more current than any other documentation included with the product.

Product-Specific Documentation

The following documentation for this product is available on the TIBCO ActiveMatrix BusinessWorks™ Product Documentation page:

- *TIBCO ActiveMatrix BusinessWorks™ Release Notes*

- *TIBCO ActiveMatrix BusinessWorks™ Administration*

- *TIBCO ActiveMatrix BusinessWorks™ Concepts*

- *TIBCO ActiveMatrix BusinessWorks™ Error Codes*

- *TIBCO ActiveMatrix BusinessWorks™ Getting Started*

- *TIBCO ActiveMatrix BusinessWorks™ Installation*

- *TIBCO ActiveMatrix BusinessWorks™ Palette Reference*

- *TIBCO ActiveMatrix BusinessWorks™ Process Design*

To directly access documentation for this product, double-click the following file:

TIBCO_HOME`/release_notes/TIB_<productID>_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:\tibco`. On UNIX systems, the default *TIBCO_HOME* is `/opt/tibco`.

Other TIBCO Product Documentation

When working with ActiveMatrix BusinessWorks, you may find it useful to read the documentation of the following TIBCO products:

- TIBCO Designer™: *TIBCO Designer is an easy to use graphical user interface for design-time configuration of TIBCO applications. TIBCO Designer includes online help for each palette.*

- TIBCO Runtime Agent™: *TRA supplies a number of TIBCO and third-party libraries used by ActiveMatrix BusinessWorks.*

- TIBCO Administrator™: *TIBCO Administrator is the monitoring and managing interface for new-generation TIBCO products such as ActiveMatrix BusinessWorks.*

- TIBCO Rendezvous® : *TIBCO Rendezvous software uses messages to enable distributed application programs to communicate across a wide variety of hardware platforms and programming languages.*

How to Access Related Third-Party Documentation

When working with ActiveMatrix BusinessWorks, you may find it useful to read the documentation of the following third-party products:

How to Contact Support for TIBCO Products

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- To access the Support Knowledge Base and getting personalized content about products you are interested in, visit our product Support website.

- To create a Support case, you must have a valid maintenance or support contract with a Cloud Software Group entity. You also need a username and password to log in to the product Support website. If you do not have a username, you can request one by clicking **Register** on the website.

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