TIBCO ActiveMatrix BusinessWorks™

Release Notes

Version 5.14.1
May 2022

Contents

Release Notes

This *Release Notes* lists issues according to the topic area.

> TIBCO Designer, TIBCO Administrator, and TIBCO Runtime Agent are now shipped as separate products, each with release notes of their own. The release notes for these products are no longer included with the *TIBCO ActiveMatrix BusinessWorks Release Notes*.

Check the TIBCO Product Support web site at http://support.tibco.com for product information that was not available at release time. Entry to this site requires a user name and password. If you do not have one, you can request one. Your web browser must support cookies and you must have a valid maintenance or support contract to use this site.

> The information prior to the release 5.4.0 has been removed from the current version of the release notes. Refer to the release notes of the older release versions to access that information.

Topics

New Features

This section lists features added since the last major release of this product.

Release 5.14.1

The following are the new features 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 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 the *TIBCO ActiveMatrix BusinessWorks Palette Reference* guide.

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 **Authentication Type** drop-down list:

• Basic Authentication

• OAuth 2.0

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

Support for IMAP protocol in the Receive Mail activity

The new **Protocol** drop-down list is added to 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 the *TIBCO ActiveMatrix BusinessWorks Palette Reference* guide.

Support for Apache Tomcat

Apache Tomcat 9.0.62 support is added in this release.

Upgrade to Log4j jar

To address security vulnerabilities, the Log4j jar has been upgraded from version 1.x. to 2.17.1.

Support for TLS version 1.3

With this release, out-of-the-box support is added for TLS 1.3 version.

Support for EMS version 10.1.x

Support has been added for EMS 10.1.x version.

Dependency Checks

Following are the required dependency checks for TIBCO ActiveMatrix BusinessWorks 5.14.1:

- TIBCO Runtime Agent 5.11.3
- TIBCO Rendezvous 8.5.1 for Linux
- TIBCO Rendezvous 8.5.2 for Windows

Platform Support

Following are supported in this release:

- Microsoft Windows Server 2022 64-bit on x86-64
- Microsoft Windows Server 2019 64-bit on x86-64

• Oracle Linux 8.x

Database Support

Following are supported in this release:

• IBM DB2 for Linux, Unix, and Windows 11.5.x

• MariaDB 10.3.x, 10.5.x, 10.6.x

• PostgreSQL 11.x

Release 5.14

The following are the new features in this release.

Kerberos Authentication

Kerberos authentication is now supported for the Send HTTP Request activity.

Delivery Delay Support

Support added to set the delivery delay (in milliseconds), before the JMS provider delivers the message to a consumer.

This impacts the following activities:

• JMS Queue Sender

• JMS Queue Requestor

• JMS Topic Publisher

• JMS Topic Requestor

• Reply to JMS Message

HTTP Patch Support

The HTTP PATCH method is now supported on the client and the server side.

Dependency Checks

Following are the required dependency checks for TIBCO ActiveMatrix BusinessWorks 5.14:

• TIBCO Runtime Agent 5.11.0

• TIBCO Rendezvous 8.4.3

Platform Support

Following are supported in this release:

- IBM AIX 7.2 64-bit on pSeries

- Microsoft Windows 10 64-bit on x86-64

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

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

Database Support

Following are supported in this release:

- Microsoft SQL Server 2016

- PostgreSQL 9.x, 10.x

- Sybase 16.0.x (SAP ASE)

- MariaDB 10.1.x, 10.2.x

Release 5.13.2

The following are the new features in this release.

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* guide.

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* guide.

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 **Authentication Type** drop-down list:

- Basic Authentication
- OAuth 2.0

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

Platform Support

Following are supported in this release:

- Microsoft Windows 10 64-bit on x86-64
- Microsoft Windows Server 2019 64-bit on x86-64
- Red Hat Enterprise Linux Server 8 64-bit on x86-64

Database Support

Following are supported in this release:

- Microsoft SQL Server 2017
- Microsoft SQL Server 2019
- PostgreSQL 11.x
- MariaDB 10.3.x
- Oracle Database 18c
- Oracle Database 19c

Dependency Checks

Following are the required dependency checks for TIBCO ActiveMatrix BusinessWorks 5.13.2:

- TIBCO Runtime Agent 5.10.1
- TIBCO Rendezvous 8.4.6

Release 5.13.1

This release does not introduce any new features.

Release 5.13

The following are the new features in this release.

Detail element in fault schema

The SOAP default fault element schema displays the detail element.

This impacts fault messages for the following activities:

- Invoke Partner
- SOAP Request Reply

Passing dynamic HTTP and basic authentication attributes in SOAP Request Reply activity

Support added to dynamically pass the user name and password for each SOAP request.

This impacts the following activities:

- SOAP Request Reply
- Partner Link Configuration

Incoming and Outgoing HTTP Headers and Cookies in a SOAP Request

Support added to expose the HTTP headers and cookies in the following activities:

- SOAP Request Reply
- Partner Link Configuration

MTOM support with SOAP 1.1 binding

Support added for MTOM with SOAP 1.1 binding.

This impacts the following activities:

- SOAP Request Reply
- SOAP Event Source
- Partner Link Configuration
- Service

Reconnecting to JMS Servers for a list of exceptions

Support added for reconnecting to the JMS servers when connections are interrupted. Support is provided for a configurable list of exceptions.

For details, refer to the section Reconnecting to JMS Servers, in *TIBCO ActiveMatrix BusinessWorks Palette Reference* guide.

Log4j Configuration File

Support added to print the location of the log4j configuration file.

Sequenced Elements and Enumeration

Support added for sequenced elements and mapping enumeration to simple data type.

This impacts the following activities:

- Java to XML
- XML to Java

Removal of Manual Activity of adding the Prefix - Namespace pair

Support added for removal of the manual activity of adding the prefix-namespace pair to the association file.

It impacts Security Policy Association.

Overriding Content Type

Support added to override content type while sending MTOM messages.

This impacts the following activities:

- SOAP Request Reply
- SOAP Send Reply
- Invoke Partner
- Service

For details, refer to the section Overriding the Content Type MimeHeader, in *TIBCO ActiveMatrix BusinessWorks Palette Reference* guide.

Reading binary data directly from the file

Support added to read binary data directly from the file in a base64 field when MTOM is used.

This impacts the following activities:

- SOAP Request Reply
- SOAP Send Reply
- Invoke Partner
- Service

Filter messages using CorrelationID

Support added for filtering messages for the SOAP Request Reply activity using the Correlation ID.

It impacts SOAP Request Reply.

Checking for Mandatory or Optional fields in Continue On Error feature in Parse Data

Support added to check for mandatory or optional fields in the Continue on Error feature.

It impacts Parse Data.

Dependency Checks

Following are the required dependency checks for TIBCO ActiveMatrix BusinessWorks 5.13:

- TIBCO Runtime Agent 5.10.0
- TIBCO Rendezvous 8.4.3

Platform Support

The following are supported in this release:

- Microsoft Windows
  - Windows 8.1 64 bit
  - Oracle Enterprise Linux 7.x 64 bit
  - RHEL 7.x 64 bit

Database Support

The following are supported in this release:

- Oracle 12c RAC
- Microsoft SQL Server 2014

Changes in Functionality

This section lists changes in functionality since the last major release of this product.

Release 5.14.1

There are no changes in functionality in this release.

Release 5.14

Disabling DOCTYPE declaration

For XML Payload, ActiveMatrix BusinessWorks does not support the DOCTYPE declaration. To enable DTD, set the property, `bw.plugin.disableDTD` to `false`.

Transfer-Encoding header set to Chunked

The output of the HTTP Receiver activity now contains a new header, Transfer-Encoding. This new header is set to Chunked instead of the content-length header for request where mime attachments are set to filename.

Release 5.13.2

There are no changes in functionality in this release.

Release 5.13.1

Disabling DOCTYPE declaration

For XML Payload, ActiveMatrix BusinessWorks does not support the DOCTYPE declaration.

To enable DTD, set the property `bw.plugin.disableDTD` to `false`.

Release 5.13

There are no changes in functionality in this release.

Deprecated and Removed Features

This section describes deprecated features (if any), and lists features, if relevant, that may be useful alternatives to the deprecated features. Any use of a deprecated feature should be discontinued as it may be removed in a future release. You should avoid becoming dependent on deprecated features and become familiar with the suggested alternative features.

This section also lists features that are removed (if any).

Release 5.14.1

Deprecated Features

The following are no longer supported:

- IBM DB2 for Linux, Unix and Windows 10.1.x, 10.5.x
- MariaDB 10.1.x and 10.2.x
- Microsoft SQL Server 2008 R2, 2008.x, 2012, and 2012 R2
- MySQL NDB Cluster
- Oracle Database 11g and 11g RAC
- Oracle Database 12c 12.1.x
- PostgreSQL 9.x

Removed Features

No features are removed in this release.

Release 5.14

Deprecated Features

No features are deprecated in this release.

Removed Features

No features are removed in this release.

Release 5.13.2

Deprecated Features

The following are no longer supported:

- Microsoft SQL Server 2008 R2
- Microsoft SQL Server 2008.x

Removed Features

No features are removed in this release.

Release 5.13.1

Deprecated Features

No features are deprecated in this release.

Removed Features

No features are removed in this release.

Release 5.13

Deprecated Features

No features are deprecated in this release.

Removed Features

No features are removed in this release.

 It is recommended not to upgrade to TIBCO ActiveMatrix BusinessWorks 5.12.0 and above and TIBCO Runtime Agent 5.9.0 and above, if you are using JRE 1.6.

Migration From Previous Releases

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 5.14.0 environment before installing 5.14.1.

Third-Party Software Support

TIBCO ActiveMatrix BusinessWorks can be used to work with external systems such as databases and JMS servers. This section lists the third-party products that TIBCO ActiveMatrix BusinessWorks supports.

Any products that are not mentioned in this section are not officially supported.

Supported Platform

Apache Tomcat Support

Apache Tomcat 9.0.62 support is added.

HTTP Component Support

HTTP Component 4.5.5 is supported.

JDBC Support

TIBCO ActiveMatrix BusinessWorks can communicate with a database using the JDBC Connection shared configuration resource. The connection can be used to perform database work with activities in the JDBC palette or it can be used to specify the data store for a process engine's internal data. See *TIBCO ActiveMatrix BusinessWorks Administration* for more information about specifying a process engine's data store. See *TIBCO ActiveMatrix BusinessWorks Palette Reference* for more information about using the JDBC palette.

Database Support

TIBCO ActiveMatrix BusinessWorks supports the following databases:

- IBM DB2 for Linux, Unix, and Windows 11.1.x, 11.5.x
- IBM DB2 for z/OS 11.1.x
- MariaDB 10.3.x, 10.5.x, 10.6.x
- Microsoft SQL Server 2014, 2016, 2017, 2019
- MySQL 5.x
- Oracle Database 12c 12.2.x

- Oracle Database 12c RAC 12.1.x

- Oracle Database 18c 18.x

- Oracle Database 19c 19.x

- PostgreSQL 10.x, 11.x

- Sybase 16.0.x (SAP ASE)

Supported Drivers that are not Bundled

The JDBC Connection resource also lists the following drivers in the drop-down list:

- `oracle.JDBC.driver.OracleDriver (oci)`
- `oracle.JDBC.driver.OracleDriver (thin)`
- `com.sybase.jdbc2.jdbc.SybDriver`
- `com.ibm.db2.jcc.DB2Driver`
- `com.mysql.jdbc.Driver`

These drivers are officially supported, but they are not bundled with TIBCO ActiveMatrix BusinessWorks. You must download and configure these drivers before using them in the JDBC Connection resource. Also, you must add the driver location to the TIBCO ActiveMatrix BusinessWorks classpath before using them.

Unsupported Drivers

There are other JDBC 2.0-compliant drivers listed in the JDBC Connection resource. These drivers should work correctly, but they are not officially supported. You must download and configure these drivers because they are not included with TIBCO ActiveMatrix BusinessWorks. These drivers are the following:

- `sun.jdbc.odbc.JdbcOdbcDriver`
- `weblogic.jdbc.mssqlserver4.Driver`

You can download, install, and use other JDBC drivers, but TIBCO does not guarantee the drivers will function properly with TIBCO ActiveMatrix BusinessWorks. To use an unsupported driver, perform the following:

1. Download the JDBC driver and copy the required JAR files to a location in the classpath of the TIBCO ActiveMatrix BusinessWorks Engine. For example, you can copy the files to the following location: *TIBCO_HOME*/tpcl/*<version>*/jdbc.

2. In the JDBC Connection resource, choose Select Driver from the drop-down list in the JDBC Driver field and type in the name of the driver class in the text

box within that field. Then, type in the correct URL in the Database URL field and specify the other fields in the resource.

JMS Support

To use the activities in the JMS palette, you must have installed and configured a JMS (Java Messaging Service) server. TIBCO ActiveMatrix BusinessWorks acts as a JMS client when interacting with a JMS server.

TIBCO ActiveMatrix BusinessWorks supports TIBCO Enterprise Message Service. The latest release TIBCO Enterprise Message Service is fully backward-compatible with clients from earlier releases. Therefore, your process definitions that use JMS will run against any version of the TIBCO Enterprise Message Service.

TIBCO ActiveMatrix BusinessWorks also supports the following JMS servers:

- Oracle WebLogic Server Version 12.1.1

- IBM WebSphere 8.5.5

- JBoss 7.1.1

- IBM WebSphere MQ 8.0.x, 9.x

Application Servers

For EJB and Java Transaction API (JTA) support, the following application servers can be used:

- IBM WebSphere 8.5.5

- Oracle WebLogic Version 12.1.1

- JBoss 7.1.1

Closed Issues

The tables in this section list issues that were closed in the named releases. The information is organized on a palette basis, even though many issues refer to the runtime behavior of the activities.

Closed in Release	Change Request ID	Summary
General Fixes		
5.14.1	BW-18638	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`

Closed in Release	Change Request ID	Summary
5.14.1	BW-18630	TIBCO ActiveMatrix BusinessWorks fails to invoke activities of TIBCO ActiveMatrix Adapter for WebSphere MQ and generates NullPointerException intermittently.
5.14.1	BW-18519	Installation of BW 5.14.0 HF012 package impacts the existing hotfix setup and a few feature support. This has been addressed through the required packaging update.
5.14.0	BW-17332	Security policy was unable to authenticate LDAP users integrated with ActiveMatrix BusinessWorks Administrator.
5.14.0	BW-17326	Custom faultstring and faultcode did not populate correctly in the SOAP 1.2 fault message format.
5.14.0	BW-17309	The queue sender failed as expected when the maximum message limit was reached on the destination queue but the JMS local transactions did not roll back.
5.14.0	BW-17260	A NullPointerException was thrown and the job was not executed when a null value was passed to the End activity of the called subprocess.
5.14.0	BW-17247	The SOAP service did not disable the assertion processing for ActiveMatrix BusinessWorks. A property has been introduced for this. Set the property `ws.security.policy.suppress.assertion.processing` to `true`, to disable the assertion processing. The default value is `false`.
5.14.0	BW-17207	References of java objects returned from a java method inside a group, are returned as NULL outside the group. A property has been introduced for this. Set the property `LoopGroup.releaseReferences` to `false`, to enable this fix. The default value is `false`.
5.14.0	BW-17198	When ActiveMatrix BusinessWorks encountered database exceptions, the Critical Section group did not release the lock and threw the timeout error for all subsequent requests.

Closed in Release	Change Request ID	Summary
5.14.0	BW-17150	TIBCO ActiveMatrix BusinessWorks service agent returned the `WS Security Error: 4` `com.tibco.spin.soap.processors.SoapProcessingException:` `WS Security Error: 4` error for invalid value type security token.
		A property has been introduced for this. Set the property `bw.plugin.soap.security.lessRestrictive` to `true`, to enable this fix. The default value is `false`.
5.14.0	BW-17126	The process statistics did not report the correct process count on the BusinessWorks Administrator. When no active processes were running the Administrator reported more than one running process.
5.14.0	BW-17094	The Get Activity method in the EngineHawkMicroagent displayed an incorrect value for Activity Class.
5.14.0	BW-17089	The Get Activity method in the EngineHawkMicroagent displayed an incorrect value for the Activity Class.
5.14.0	BW-17073	In TIBCO ActiveMatrix BusinessWorks an issue was observed when the Partner Link Configuration used the WSDL which uses soap 1.2 namespace. When using the "+" to add a WSDL operation, the cursor changed into the busy/wait icon without moving and threw a NullPointerException when saved.
5.14.0	BW-17040	Basic authentication failed when ActiveMatrix BusinessWorks 5.11 was used with TIBCO Runtime Agent 5.8 HF006 or above.
5.14.0	BW-16995	The number format exception in the **End** activity caused the engine to hang.The engine tried the same job multiple times.
5.14.0	BW-16993	Some coercions were lost when a BusinessWorks project was opened in Designer.
5.14.0	BW-16833	The HTTP Error was not handled correctly when SOAP 1.2 is used by the SOAP Request Reply activity. A property has been introduced for this. Set the property `java.property.bw.plugin.soap12.http.retainHttpException` to `true`, to enable this fix. The default value is `false`.

Closed in Release	Change Request ID	Summary
5.14.0	BW-16829	From BW 5.12 HF3 onwards, any object reference returned by a sub-process was not accessible in the calling process.
		A property has been introduced for this. Set the property `ProcessGroup.releaseReferences` to `true` to release references of Java objects stored by the activities inside the process group.The default value is `false`.
		Note: To avoid memory leaks as described in BW-16622, set the following:
		1.To release references of Java objects stored by activities inside the
		loop - Set the property `LoopGroup.releaseReferences` to `true`.
		2.To release references of Java objects stored by activities inside the
		process group - Set the property `ProcessGroup.releaseReferences` to `true`.
5.14.0	BW-16698	Security policy was unable to authenticate LDAP users integrated with BusinessWorks Administrator.
5.14.0	BW-16620	The TIBCO Runtime Agent hotfix did not get effective in TIBCO Designer after installing BusinessWorks.
5.14.0	BW-16507	The Get Activity method in the EngineHawkMicroagent displayed an incorrect value for Activity Class.
5.14.0	BW-16195	Jobs created by the main process went into a hung state and were executed in an infinite loop if the end activity of the call process reported a NullPointerException.
5.13.2	BW-17834	The UsernameToken authentication did not work for LDAP users.
5.13.2	BW-17814	TIBCO ActiveMatrix BusinessWorks failed to invoke activities of TIBCO ActiveMatrix Adapter for WebSphere MQ and generated NullPointerException intermittently.
5.13.1	BW-17507	The **Transform XML** activity resolved the wrong location for relative path resolutions with xsl:include when the Saxon-B XSLT 2.0 transform technique was used.
5.13.1	BW-17332	Security policy was unable to authenticate LDAP users integrated with TIBCO ActiveMatrix BusinessWorks Administrator.

Closed in Release	Change Request ID	Summary
5.13.1	BW-17326	Custom faultstring and faultcode did not populate correctly in the SOAP 1.2 fault message format.
5.13.1	BW-17260	A NullPointerException was generated and the job was not executed when a null value was passed to the **End** activity of the called subprocess.
5.13.1	BW-17247	The SOAP service did not disable the assertion processing for TIBCO ActiveMatrix BusinessWorks.
		A property has been introduced for this.
		Set the property `ws.security.policy.suppress.assertion.processing` to `true`, to disable the assertion processing.
		The default value is `false`.
5.13.1	BW-17207	References of Java objects returned from a Java method inside a group, were returned as NULL outside the group.
		A property has been introduced for this.
		Set the property `LoopGroup.releaseReferences` to `true`, to enable this fix.
		The default value is `false`.
5.13.1	BW-17198	When TIBCO ActiveMatrix BusinessWorks encountered database exceptions, the Critical Section group did not release the lock and generated the timeout error for all subsequent requests.
5.13.1	BW-17150	TIBCO ActiveMatrix BusinessWorks service agent returned the WS Security Error: 4
		`com.tibco.spin.soap.processors.SoapProcessingException:` `WS Security Error: 4` error for invalid value type security token.
		A property has been introduced for this.
		Set the property `bw.plugin.soap.security.lessRestrictive` to `true`, to enable this fix.
		The default value is `false`.
5.13.1	BW-17126	The process statistics did not report the correct process count on the BusinessWorks Administrator. When no active processes were running the Administrator reported more than one running process.

Closed in Release	Change Request ID	Summary
5.13.1	BW-17073	In TIBCO ActiveMatrix BusinessWorks 5.9.3, an issue was observed when the Partner Link Configuration used the WSDL which uses soap 1.2 namespace. When using the "+" to add a WSDL operation, the cursor changed into the busy/wait icon without moving and generated a NullPointerException when saved.
5.13.1	BW-17005	Inbound policy with UsernameToken authentication failed to process UsernameToken with PasswordDigest type password when TIBCO ActiveMatirx BusinessWorks 5.13 HF12 or above was installed.
5.13.1	BW-17004	Failed to change tracing roles in TIBCO Administrator.
5.13.1	BW-17002	The concurrency level in TIBCO Hawk Microagent (HMA) for instrumentation was increased.
5.13.1	BW-16997	When the TIBCO ActiveMatrix BusinessWorks engine was deployed on two machines in the primary-secondary mode, after every FT switchover, the engine used more threads. It continued using the threads till all the available java threads in the machine were used. The engine then failed with the exception java.lang.OutOfMemoryError: unable to create new native thread.
5.13.1	BW-16995	The number format exception in the **End** activity caused the engine to be unresponsive. The engine tried the same job multiple times.
5.13.1	BW-16993	Some coercions were lost when a BusinessWorks project was opened in the Designer.
5.13.1	BW-16950	Modified TIBCO ActiveMatrix BusinessWorks to replace Apache Tomcat version 7.0.57 with Apache Tomcat version 7.0.62. This is inline with the TIBCO Runtime Agent upgrade in 5.9.1 HF-001.
5.13.1	BW-16620	The TIBCO Runtime Agent hotfix did not get effective in TIBCO Designer after installing TIBCO ActiveMatrix BusinessWorks.
5.13.1	BW-16195	Jobs created by the main process went into a hung state and were executed in an infinite loop when the end activity of the call process reported a NullPointerException.

Closed in Release	Change Request ID	Summary
5.13.0	BW-16680	Information about the Service Container feature was present in the Concepts guide. The feature has been deprecated since 5.8. All occurrences of this feature have been removed from the *TIBCO ActiveMatrix BusinessWorks Concepts* guide.
5.13.0	BW-16634	The property `bw.engine.dupKey.pollPeriod.minutes` caused issues for higher value.
5.13.0	BW-16602	BusinessWorks 5x did not support JRE 1.8.0.
5.13.0	BW-16481	Support has been provided to print the location of the log4j configuration file used by log4j.
5.13.0	BW-16428	Some coercions were lost when a BusinessWorks project was opened in Designer.
5.13.0	BW-16405	The concurrency level in TIBCO Hawk Microagent (HMA) for instrumentation was increased.
5.13.0	BW-16331	Customers could not stop applications deployed and started on TIBCO Administrator containing the "Onstartup" and "Wait for..." activities, from Administrator. The applications went into the shut down state but did not stop.
5.13.0	BW-16075	Transmitting large files consumed excess memory as the SOAP Request Reply activity, using MTOM, read the files and then mapped the binary data to the base64 field.
5.13.0	BW-15901	The *TIBCO ActiveMatrix BusinessWorks Administration* guide suggests the use of the Upgrade button in the Administrator GUI while upgrading an application. This however, is not the recommended approach and this information has been updated in the Administration guide. Refer to Chapter 4, "Creating and Deploying Applications" in the *TIBCO ActiveMatrix BusinessWorks Administration* guide.
5.13.0	BW-15390	Tracing roles did not change in TIBCO Administrator.
5.13.0	BW-14330	The schema on a shared variable resource was referenced automatically in the Shared Archive while creating the Enterprise Archive Designer on Windows. It did not reference the shared variable resource automatically while using Linux.

Closed in Release	Change Request ID	Summary
5.13.0	BW-13571	The concrete WSDL generated for SOAP over JMS included an empty `<soap:address location=""/>` element and did not pass the Eclipse-provided validation rules for WS-I. This prevented AMX BPM interaction with BusinessWorks.
File Palette		
5.14.1	BW-18030	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.
5.14.0	BW-17120	When using the **Write File** activity, end line characters changed from CRLF to LF.
5.13.0	BW-9256	The **Write File** activity did not report errors against writing files to a drive that did not have sufficient disk space.
5.13.0	BW-7179	The **Copy File** activity was obstructed when the file to be copied had a parenthesis () or braces {} in it. The errors `java.util.regex.PatternSyntaxException` and `Illegal repetition near index` were reported.
FTP Palette		
5.14.1	BW-18654	FTP activities add an extra CRLF to the QUIT command.
5.14.1	BW-18639	When executing an FTP activity with the Active mode FTP connection, the connection stays in the LISTEN state even after the job is complete.
5.13.0	BW-6331	While transferring text files (in ASCII mode) with the **FTP Get** activity from a Windows server to a UNIX server, control characters were observed along with the line feed characters.
General Activities Palette		
5.14.0	BW-8476	Projects containing the **Timer** activity process starter configured to run once ran repeatedly with a new ProcessID.
5.13.1	BW-17089	The Get Activity method in the EngineHawkMicroagent displayed an incorrect value for the Activity Class.
5.13.1	BW-16507	The Get Activity method in the EngineHawkMicroagent displayed an incorrect value for an Activity Class.

Closed in Release	Change Request ID	Summary
5.13.0	BW-16368	Customers could not stop applications deployed and started on TIBCO Administrator containing the "Onstartup" and "Wait for..." activities, from Administrator. The applications were in the shutdown state but did not stop.
HTTP Palette		
5.14.1	BW-18653	BusinessWorks application with HTTP Receiver (HTTPComponent) stops listening after encountering an exception.
5.14.1	BW-18637	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.
5.14.1	BW-18636	Applications with **HTTP Receiver** activity stop receiving requests under load when the Flow Limit value is greater than 0.
5.14.1	BW-18634	The CPU usage is high when the server type is HTTPComponent.
5.14.1	BW-18633	A deadlock is observed at the **Send HTTP Response** activity when the HTTP receiver has a server type as HTTPComponent.
5.14.1	BW-18598	The **Send HTTP Request** activity fails when the Header element is `Proxy-Authorization`.
5.14.1	BW-18156	Overriding the host header value using DynamicHeaders input for the **Send HTTP Request** activity does not work.
5.14.1	BW-18109	Applications with **HTTP Receiver** activity stop receiving requests under load when the **Flow Limit** value is greater than 0.
5.14.1	BW-18065	The **Send HTTP Request** activity sets the incorrect Host value in the header when the response code is 301.
5.14.1	BW-18010	The **Send HTTP Request** activity fails when the port is not specified in the URL in the location header and the **Accept Redirects** check box is selected.
5.14.1	BW-18009	TIBCO ActiveMatrix BusinessWorks when configured with HTTPComponent and SSL, cannot close SSL ports and grow after processing HTTP requests, and generates an exception.
5.14.1	BW-18008	The **Send HTTP Request** activity sets the incorrect Host value in the header when the 301 status response is received.

Closed in Release	Change Request ID	Summary
5.14.1	BW-17955	The CPU utilization is high when an application contains the **Send HTTP Request** activity.
5.14.1	BW-17933	The performance is degraded as the **Send HTTP Request** activity takes more time when invoking services over SSL repeatedly.
5.14.1	BW-17929	The HTTP Client thread waits for a response even when the **Send HTTP Request** activity times out.
5.14.1	BW-17922	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 `bw.plugin.http.client.enableContentLengthHeader` to true in the .tra file.
5.14.1	BW-17918	The **SOAP Request Reply** activity does not work when configured with the HTTP BASIC authentication, and the proxy is configured with the BASIC authentication.
5.14.1	BW-17916	The deadlock is observed at the **Send HTTP Response** activity when the HTTP receiver has a server type as HTTPComponent.
5.14.1	BW-17914	The HTTP requests fail when having more than one **HTTP Client** activity in the same application.
5.14.1	BW-17891	The persistent HTTPS connections are not reused when the `bw.plugin.http.client.usePersistentConnectionManagerForSSL` property is set to true.
5.14.1	BW-17867	The Proxy authentication does not work when the endpoint URL is set through proxy as HTTPS, and the proxy is configured with BASIC authentication.
5.14.1	BW-17855	The **Send HTTP Request** activity with multiple Cookie headers in the input sends only one Cookie header in the outbound request.
5.14.1	BW-17774	The **Send HTTP Request** activity fails to process an HTTP response with the status code 204.
5.14.1	BW-17763	The URL Encoding in the `QueryString` value is not preserved for the **Send HTTP Request** activity.

Closed in Release	Change Request ID	Summary
5.14.1	BW-17757	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.
5.14.1	BW-17737	The PostData at the HTTP Receiver is null for the POST method.
5.14.1	BW-17394	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.
5.14.0	BW-17276	If the incoming requests on the Tomcat server had more than 100 headers defined, ActiveMatrix BusinessWorks did not create jobs for the **HTTP Receiver** Activity, and threw the `400 bad request` error.
		A property has been introduced for this.
		Set the property `bw.plugin.http.maxHeaderCount` to the integer value. The default value for `maxheadercount` for Tomcat is 100.
5.14.0	BW-17076	After installing the TIBCO Runtime Agent 5.7.4 HF03, BusinessWorks 5.10 reported exceptions when the server type httpComponent was used.
5.14.0	BW-17044	The HTTP server threw a `NullPointerException` intermittently when the servlet output stream was closed.
5.14.0	BW-16963	When passing the message body using post, the content-length value was wrong if the mime part was not specified.
5.14.0	BW-16652	HTTP requests containing repeating headers, dynamic headers and MIME parts failed with the error `java.lang.ClassCastException`.
5.14.0	BW-16412	The HTTP client did not decompress messages properly when the messages were received in the gzip format and the content type of the messages was multipart.
5.13.2	BW-17946	The deadlock was observed at the **Send HTTP Response** activity when the HTTP receiver had a server type as **HTTPComponent**.

Closed in Release	Change Request ID	Summary
5.13.2	BW-17905	The CPU usage was high when a server type was **HTTPComponent**.
5.13.2	BW-17815	Applications with **HTTP Receiver** activity stopped receiving requests under load when the Flow Limit value was greater than 0.
5.13.1	BW-17187	**HTTP Request Reply** activity sends the HTTP request with the default value of accept-encoding: gzip. However, the reply sent by the server with gzip content did not decompress the content correctly according to the header.
5.13.1	BW-17143	TIBCO ActiveMatrix BusinessWorks returned the default error response which included the server information, when an invalid or bad request was received.
		A property has been introduced for this.
		Set the property `bw.plugin.http.suppressHttpResponseHeader` to `true`, to enable this fix.
5.13.1	BW-17127	Server information and the server version was exposed in the HTTP Response headers, when an invalid request was passed. Information on the supported methods were also exposed when an invalid method was passed in a request.
5.13.1	BW-17113	Server details were displayed in the SOAP response HTTP header when the web services were exposed using the SOAP or Service palette.
		A property has been introduced for this.
		Set the property `bw.plugin.http.suppressHttpResponseHeader` to `true` to suppress the HTTP headers, Server and Allow.
		The default value is `false`.
5.13.0	BW-17475	The **Send HTTP Request** activity with SSL proxy connection was not using Identity Key-store and Trusted Certificates configured in the project.
5.13.0	BW-16865	Support provided for newer versions of Tomcat to avoid shipping a vulnerable version.
5.13.0	BW-16519	The HTTP clients did not send the server name, that is a part of the Server Name Indication (SNI) extension.
		Support has now been provided for Server Name Indication.

Closed in Release	Change Request ID	Summary
5.13.0	BW-16472	BusinessWorks 5.10 threw the fatal alert error when persistent connection was enabled.
5.13.0	BW-13928	BusinessWorks did not downgrade to SSL 3.0 even though the HTTP server supported only this protocol version. It failed with the exception `iaik.security.ssl.SSLException: Peer sent alert: Alert Fatal: bad record mac`, exception.
5.13.0	BW-10171	The **Send HTTP Request** sent to the HTTP Receiver did not work when the ResponseActivityInput was not provided.
5.13.0	BW-9295	There was no provision to pass dynamic HTTP attributes and basic authentication attributes in the SOAP Request Reply activity.
Java Palette		
5.14.0	BW-16834	Memory leak was observed in the **XML to Java** activity. A property has been introduced for this. Set the property `LoopGroup.releaseReferences` to `true` to release the references of Java objects stored by the activities inside the loop. The default value is `false`. Note: If the **Accumulate Output** option is selected for a loop, then BusinessWorks will ignore this property.
5.14.0	BW-15085	Validating a project containing Java Schemas generated validation errors. A property has been introduced for this. Set the property 'bw.plugin.javaschema.loadJavaSchema' to 'true' in designer.tra.The default value is 'false'.
5.13.1	BW-17068	TIBCO ActiveMatrix BusinessWorks not releasing references to Java objects returned by the Java Method activity in a transaction group caused memory leak.
5.13.0	BW-16829	BW 5.12.0 HF03 onwards, any object reference returned by a sub-process was not accessible in the calling process.
5.13.0	BW-16622	TIBCO ActiveMatrix BusinessWorks did not release references to the Java objects returned by the **Java Method** activity inside a group, and this caused memory leak.
5.13.0	BW-16430	Relative path references failed to validate after upgrading to TIBCO ActiveMatrix BusinessWorks 5.12.0.

Closed in Release	Change Request ID	Summary
5.13.0	BW-15970	Sequenced Elements and Enumeration is now supported in the **Java to XML** and **XML to Java** activities.
JDBC Palette		
5.14.1	BW-18695	The **JDBC Call Procedure** activity does not show functions when connecting to Postgres, only procedures are listed.
5.14.1	BW-18635	The **JDBC Call Procedure** activity that returns SYS_REFCURSOR fails.
5.14.1	BW-18632	The connection issue with the SQL server when using DataDirect JDBC Driver has been fixed.
5.14.0	BW-17302	ActiveMatrix BusinessWorks left connections open when it used transactions with DB2 on IBM Z/OS. When stored procedures were run, it returned an ABEND code. Instead of rolling back, BusinessWorks tried to execute a test statement and tried to close the connection.
5.14.0	BW-17220	The **Checkpoint** and **Wait Notify** activities were not supported with PostgreSQL. To create the database tables manually, run the script dbs_postgres.sql.
5.14.0	BW-16985	When using the activities **JMS Topic Publisher** and **JMS Queue Sender** a number of jobs were hanging when the connection to the EMS server was terminated. The jobs were hanging as the activities tried reconnecting to the EMS Server after the connection from the EMS Server was terminated.
		A property has been introduced for this. Set the property `bw.plugin.jmssender.enableLazyRetryOnFailure` to `true`. Default value is `false`.
		After setting the value to `true`, when the connection to the JMS Server breaks an exception is thrown instantly.The retry behavior will continue with minimal jobs, and in order to avoid the hanging state the remaining jobs will proceed on error path.
5.14.0	BW-16952	The **JDBC Call Procedure** failed after upgrading to Oracle 12C.
5.14.0	BW-16653	The **JDBC Call Procedure** activity failed to execute a cursor with the PL/SQL function, and threw an exception.

Closed in Release	Change Request ID	Summary
5.14.0	BW-16461	When the schema names were mapped to global variables in the **JDBC Call Procedure** activity, the activity did not refer to the updated schema name when the global variable values were updated at runtime.
5.13.2	BW-17927	The connection issue with the SQL server when using DataDirect JDBC Driver is fixed.
5.13.2	BW-17903	The **JDBC Call Procedure** activity that returned SYS_REFCURSOR failed.
5.13.1	BW-17225	The Wait Notify feature was not supported with MySQL. To create the database tables manually, run the script dbs_mysql.sql.
5.13.1	BW-16929	Running a bwengine with multi engine locks and critical section groups with SQL Server database caused DB deadlocks.
5.13.1	BW-16825	When running a BusinessWorks process with JBoss Transaction Manager 4.7, JDBC XA resources failed in the prepare phase of a 2-Phase commit and generated an error.
5.13.0	BW-16842	The **JDBC Call Procedure** activity failed after upgrading to Oracle 12C.
5.13.0	BW-16452	BusinessWorks did not cache the objects `oracle.sql.StructDescriptor` and `oracle.sql.ArrayDescriptor` in the `getOracleStructDescriptor()` and `getOracleArrayDescriptor()` methods, respectively.
5.13.0	BW-16307	The **JDBC Query** activity processed in subsets caused the `fetch out of sequence` error when called multiple times in a loop under XA transaction group.

Closed in Release	Change Request ID	Summary
5.13.0	BW-16181	ActiveMatrix BusinessWorks left connections open when it used transactions with DB2 on IBM Z/OS. When stored procedures were run, it returned an ABEND code. Instead of rolling back, BusinessWorks tried to execute a test statement and tried to close the connection.
		To clear the bad connections for JDBC and JTA transactions, set property `bw.plugin.jdbc.clearBadConnectionForTransactions` to `true`. Default value is `false`.
		To stop the **JDBC** activity in a transaction from retrying to execute the query in case of failure, set property `propert bw.plugin.jdbc.disableRetryInTransaction` to `true`. Default value is `false`.
5.13.0	BW-15969	The **JDBC** activity did not observe the timeout value.
JMS Palette		
5.14.1	BW-17857	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.`
5.14.1	BW-16639	JMS Application Properties missing in EAR file when referenced by Service Agent palette.
5.14.0	BW-17344	Attempts to close the session failed, and the commit failed error was thrown when running processes with the JMS transaction group.
5.14.0	BW-17137	The **JMS Receiver** and the **JMS Sender** activities that used the same connection resource got into a dead lock situation while reconnecting to the EMS Server.
5.14.0	BW-16992	Topic only subscribers failed when using bw.plugin.jms.enableBridge and threw the error `java.lang.ClassCastException: com.tibco.tibjms.naming.TibjmsContext cannot be cast to javax.jms.QueueConnectionFactory.`
5.13.1	BW-17560	Allow customization of the security vendor used by the BW EMS palette SSL connection. This is property based solution. Set property `TIBCO_EMS_SSL_SECURITY_VENDOR` for ems security vendor for SSL.

Closed in Release	Change Request ID	Summary
5.13.1	BW-17317	The TIBCO ActiveMatrix BusinessWorks engine on standby mode did not close the EMS connection when a project was deployed in the Fault Tolerance mode with the primary and secondary configuration.
5.13.1	BW-17309	The queue sender failed as expected when the maximum message limit was reached on the destination queue but the JMS local transactions did not roll back.
5.13.1	BW-16985	When using the activities **JMS Topic Publisher** and **JMS Queue Sender** a number of jobs became unresponsive when the connection to the EMS server was terminated.
		The jobs became unresponsive as the activities tried reconnecting to the EMS Server after the connection from the EMS Server was terminated.
5.13.0	BW-17561	Failures were reported when JMS over SSL was used on the AIX platform when TIBCO Enterprise Messaging (EMS) version 8.4 was used.
5.13.0	BW-16682	Message payload was lost when the acknowledgment mode in JMS Queue Receiver was configured to TIBCO EMS Explicit and the sequence key with flowlimit and maxjobs was set to a value other than 1, when TIBCO ActiveMatrix BusinessWorks™ ActiveAspects Plug-in was installed.
5.13.0	BW-16573	There were no options to filter messages (for example a criteria such as JMSCorrelationID) from the reply queue in the **JMS Queue Requestor** and **SOAP Request Reply** activities.
5.13.0	BW-16528	**JMS Queue Receiver** threw the Null Pointer Exception when it tried to receive a message, which had a String application property and the value was set to Null.
5.13.0	BW-16433	A session leak was reported when the **Get JMS** activity was used within an XA transaction. The leak was also observed when the following error was thrown: `java.lang.ClassCastException: com.tibco.pe.plugin.ActivityTimedOutException` cannot be cast to `com.tibco.plugin.share.jms.impl.JMSEventContext`.
5.13.0	BW-16413	The **JMS Receiver** and **JMS Sender** that used the same connection resource got into a dead lock while reconnecting to the EMS Server.

Closed in Release	Change Request ID	Summary
5.13.0	BW-16283	**JMS Queue Receiver** threw a NullPointerException, when paging was on and the sequencing key was used.
5.13.0	BW-15271	Under certain circumstances, TIBCO ActiveMatrix BusinessWorks received the exception `weblogic.jms.common.LostServerException` when the JMS Sender activity was used with the Weblogic server and the server went down. When the Weblogic server came up, BusinessWorks could not reconnect with the server.
Mail Palette		
5.14.1	BW-18629	The **Receive Mail** activity displays only the first part of a message with content type as `mutipart/alternative`.
5.14.1	BW-17742	The **Send Mail** activity ignores the `mail.smtp.timeout` system property.
5.14.0	BW-17373	The **Receive Mail** activity did not receive emails when the email contained an empty string in the CC value.
5.14.0	BW-16854	The Mail client was unable to create a new session and returned the previously created session. A property has been introduced for this. Set the property `bw.plugin.mail.reuseSession` to `false` to stop getting the earlier created session.
5.13.2	BW-17821	The **Receive Mail** activity displayed only first part of a message with content type as mutipart/alternative.
5.13.1	BW-17517	The **Receive Mail** activity was not able to parse in-line messages with multi-part body content.
5.13.1	BW-17306	The **Send Mail** activity ignored the system property, `mail.smtp.timeout`.
5.13.1	BW-17266	The **Receive Mail** activity did not receive emails when the email contained an empty string in the CC value.
5.13.1	BW-17082	The **Receive Mail** activity failed to receive emails where the subject line was blank.

Closed in Release	Change Request ID	Summary
5.13.1	BW-13688	The **Send Mail** activity failed even when one of the email addresses provided in the addresses list was not valid.
		A property has been introduced for this.
		Set the property `mail.smtp.sendpartial` to `true`.
		The default value is `false`.
5.13.0	BW-17303	The **Receive Mail** activity threw an exception when the content-disposition field for Mime headers defined the filename for the attachments.
5.13.0	BW-16592	The **Receive Mail** activity did not extract the body text if the message contained an attachment.
		To use this fix set the property to `bw.plugin.mail.receiverFlattenNestedAttachments` to `true`. The default value is `false`.
5.13.0	BW-16321	The **Receive Mail** activity did not wait for complete termination of the octet CRLF.CRLF before executing the command UDIL with the POP3 server. The error `javax.mail.MessagingException: error getting UIDL` was thrown.
Policy Palette		
5.14.1	BW-18640	The UsernameToken authentication using the Custom Password Lookup feature does not work when the password in the inbound request is of the type PasswordDigest.
5.14.1	BW-18631	Inbound security policy processing fails when the timestamp does not contain Expires element.
5.14.1	BW-18628	The UsernameToken authentication does not work for LDAP users.
5.14.1	BW-18588	WSS authentication fails when Password is sent as PasswordDigest and lessRestrictive SOAP security property is set to true.
5.14.1	BW-17892	The UsernameToken authentication using Custom Password Lookup does not work when a password in the inbound request is of the type PasswordDigest.

Closed in Release	Change Request ID	Summary
5.14.1	BW-17760	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 `VerifyHostName` is unselected in the SSL Configuration.
5.14.0	BW-17537	The exception message with the wrong certificate path was displayed when the correct path was not defined for the Global Trust CA Store property.
5.14.0	BW-17242	When ActiveMatrix BusinessWorks was used to apply the integrity policy to incoming SOAP messages, it expected the same signature and digest algorithm.
		It rejected the message as the xml digital signature API used two different algorithms for SHA1 and SHA256 in the elements, SignatureMethod and DigestMethod.
		A property has been introduced for this.
		Set the property `ws.security.policy.turnoff.inbound.validation` to `true` to turn off the validation that validates the signature and digest algorithm for the secure SOAP message. The default value is `false`.
5.14.0	BW-16845	The attribute Encoding Type was missing from the nonce element when a request was sent through **SOAP Request Reply** using the security type Username Token.
		To retain the original behavior set the property `java.property.com.tibco.security.wss4j.NO_UT_NONCE_ENCODING=true`.The default value of this property is `false`.
5.13.2	BW-17804	Inbound security policy processing failed when the timestamp did not contain Expires element.
5.13.1	BW-17636	Inbound policy with UsernameToken authentication failed to process UsernameToken with PasswordDigest type password when TIBCO ActiveMatrix BusinessWorks 5.13 HF12 and above was installed.
5.13.0	BW-16633	ActiveMatrix BusinessWorks 5.12 was unable to validate a signed SOAP message when the issuer DN of the certificate contained an email address.
5.13.0	BW-16571	Support provided for LaxTimeStampFirst with Confidentiality and Integrity in the **Policy** activity.

Closed in Release	Change Request ID	Summary
5.13.0	BW-16525	The manual activity of adding SOAP-ENV Namespace to SOAP Policy Association file while signing the SOAP Body and a SOAP element has now been removed.
5.13.0	BW-16364	When the Policy Palette was used for authentication and timeout, timestamp and the user name/password tokens were present in the outbound SOAP Security header. The username token appeared before the timestamp. A property has been introduced for this. Set the property `java.property.ws.security.policy.prepend.timestamp =true`, to prepend the timestamp element. The default value is `false`.
5.13.0	BW-16182	While using SecurityPolicyAssociation to sign the Soap Header element, TIBCO ActiveMatrix BusinessWorks was unable to sign the element.
5.13.0	BW-13788	BusinessWorks did not support TLS1.2.
Parse Palette		
5.14.1	BW-18048	The **Parse** activity cannot parse the part of a field containing double quotes and generates incorrect results.
5.14.1	BW-16980	The **Parse Data** activity cannot parse a column that contains both a double quote and a column separator.
5.13.0	BW-9663	The **Continue on Error** option in the **Parse Data** activity did not parse data correctly to the ErrorRow.
Rendezvous Palette		
5.14.1	BW-17740	TIBCO ActiveMatirx BusinessWorks created more selective listeners instead of creating generic listeners _RV.>.
5.14.0	BW-17145	ActiveMatrix BusinessWorks sent the elements Node and Role as empty elements in the SOAP 1.2 fault message when the corresponding values were null.
5.13.0	BW-16654	The *TIBCO ActiveMatrix BusinessWorks Administration* guide wrongly stated the use of the Rendezvous API property `setTaskBacklogLimitInMessages()` method in BusinessWorks. This has now been corrected.

Closed in Release	Change Request ID	Summary
5.13.0	BW-16451	ActiveMatrix BusinessWorks created more selective listeners instead of creating the generic listeners _RV.>.
5.13.0	BW-16450	There was an increase in the native memory when the BusinessWorks engine was started with 100 DQ receivers and 100 different DQ groups, with the tibrvnative.jar.
Service Palette		
5.14.1	BW-18455	SOAP/JMS one-way Service with Client acknowledge mode stops working after receiving the request message that causes an error in pre-process stage.
5.14.0	BW-17203	The SOAP event source was unable to process requests and failed with the error `com.tibco.spin.soap.processors.SoapProcessingException: WS Security Error : 111000`.
5.14.0	BW-17180	Web services hung while writing attachments to a file when it includes content-disposition.
5.14.0	BW-17038	The BusinessWorks service failed to understand the signature when the Binary Security Token in the incoming SOAP Request was X509v3. It failed with the NULL pointer exception.
5.14.0	BW-16866	The BusinessWorks Service over JMS failed with a NullPointerException and it did not process the subsequent message even after it received a request with an invalid SoapAction.
5.13.1	BW-17232	The logic that was implemented to replace line feed (LF) with carriage return line feed (CRLF) did not work as expected in the **Invoke Partner** activity.
5.13.1	BW-17104	The SOAP server failed to understand the signature of a SOAP request sent from the BusinessWorks SOAP client and displayed the following error: `com.tibco.spin.soap.processors.SoapProcessingException:W S Security Error : 111000`.
5.13.1	BW-16946	There was no provision to change the content-type of attachments when using MTOM attachments in the **Service** activity.

Closed in Release	Change Request ID	Summary
5.13.0	BW-16491	The global variable value for JMS Destination and SOAP Action attributes in the Service Agent configuration were incorrectly documented as "No" in the *TIBCO ActiveMatrix BusinessWorks Palette Reference* guide. This has now been corrected.
5.13.0	BW-16490	When a URL request was made to a non-existent resource, the Built-in Retrieve Resource service threw the `File Not Found` error on the console. It hung, and responses were not sent to the client.
5.13.0	BW-16152	When **Message Element For Signature** was left blank in the **Policy Association** activity on the inbound side, it did not default to anything, and the request succeeded without the signature.
5.13.0	BW-15867	There was no provision to change the content-type of attachments when using MTOM attachments in the **Service** activity.
5.13.0	BW-10167	Using the JMS transport, when the **Invoke Partner** activity executed a OneWay operation, BusinessWorks executed the next **Call Process** activity after **Invoke Partner** like it was produced, though it was not.
SOAP Palette		
5.14.1	BW-18641	Content-Length header value in a SOAP MTOM request is incorrect.
5.14.1	BW-18083	The HTTP transport headers are not available in the **SOAP Request Reply** activity's output when the invocation is over SSL.
5.14.1	BW-17993	The SSLContext is initialized even if the invocation is not over SSL when the HTTP Authentication of the **SOAP Request Reply** activity is set to BASIC.
5.14.1	BW-17778	The Content-transfer-encoding and Content-id headers are missing in MTOM requests.
5.14.1	BW-15449	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.
5.14.0	BW-17509	MTOM messages created from ActiveMatrix BusinessWorks did not include the content transfer encoding header field.

Closed in Release	Change Request ID	Summary
5.14.0	BW-17333	If SOAP messages had 2 date fields in the HTTP header field, then the **SOAP Request Reply** activity displayed validation exceptions.
5.14.0	BW-17297	SOAP services with array elements threw the `NullPointerException` when an incoming request was deserialized.
5.14.0	BW-17072	**SOAP Request Reply** activities using SOAP 1.2 were able to handle HTTP exceptions correctly after the property `java.property.bw.plugin.soap12.http.retainHttpException` as set to `true`. However, when a successful SOAP response was received, the **SOAP Request Reply** threw the exception, The HTTP server replied with a 4XX status code.
5.14.0	BW-16862	SOAP service failed at signature verification when the SOAP body contained the carriage return character.
5.14.0	BW-7140	The **SOAP Request Reply** activity threw an error if the style attribute was not available in the SOAP binding element.
5.13.1	BW-17301	In the XML injection scenario, the fault string has been suppressed from the service. To suppress the fault string, set the property `bw.plugin.soap.suppressDetailedFaultstring` to `true`. The default value is `false`.
5.13.1	BW-17271	In the **SOAP Request Reply** activity, when the JMS server was down, new jobs were blocked while attempting reconnection. A property has been introduced for this fail-fast behavior. Set the property `java.property.bw.plugin.jmssender.enableLazyRetryOnFailure` to `true`. The default value is `false`.
5.13.1	BW-17088	The **SOAP Request Reply** activity calling a web service over JMS timed out frequently when the web service included an operation that did not send a response message.
5.13.1	BW-17008	Setting large values for timeout generated the following error: `java.lang.IllegalArgumentException: timeout value is negative.`

Closed in Release	Change Request ID	Summary
5.13.1	BW-17003	The **SOAP Request Reply** activity did not set the socket connection timeout and used the OS default value. The HTTP thread was blocked by it for more than 10 minutes. A property has been introduced for this. Set the property `bw.plugin.http.setConnectionTimeout` to `true` to use the activity timeout value as the connection timeout value. The default value is `false`. The maximum allowed value is 2147482 seconds.
5.13.1	BW-16988	When the **Get Context** or **Set Context** activities were used to retrieve contents of the SOAP header, which also included the WS-Security structure, the attribute `wsu:Id` of the element `BinarySecurityToken` dropped off. A property has been introduced for this. Set the property `java.property.ws.security.policy.retain.wsu.id.attribute` to `true`, to enable the fix.
5.13.1	BW-16833	The HTTP Error was not handled correctly when SOAP 1.2 was used by the **SOAP Request Reply** activity. A property has been introduced for this. Set the property `java.property.bw.plugin.soap12.http.retainHttpException` to `true`, to enable this fix. The default value is `false`.
5.13.0	BW-16845	The attribute Encoding Type was missing from the nonce element when a request was sent through **SOAP Request Reply** using the security type Username Token. To retain the original behavior set the property `java.property.com.tibco.security.wss4j.NO_UT_NONCE_ENCODING=true`. The default value of this property is `false`.
5.13.0	BW-16637	The **SOAP Request Reply** activity was unable to deserialize a SOAP Response message that contained a multi dimensional array. Subsequently, an activity timeout error was thrown.

Closed in Release	Change Request ID	Summary
5.13.0	BW-16576	In BusinessWorks 5.12.0, some servers failed while applying the outbound policy. Applying the outbound policy caused InclusiveNamespaces to be added under SignedInfo.
		A property has been introduced for this.
		Set the property `java.property.com.tibco.trinity.wss.DontAddInclusivePrefixes=true`. The default value is `false`.
5.13.0	BW-16529	Setting large values for timeout threw the following error: `java.lang.IllegalArgumentException: timeout value is negative`.
5.13.0	BW-16521	Configure SSL was not enabled when EndPointURI in the **Partner Link Configuration** activity used global variables which had an HTTPs link.
5.13.0	BW-16488	The exception `Output data invalid, NullPointerException` occurred when the process was started with the **SOAP Event Source** activity, and the **SOAP Event Source** activity was selected for review.
5.13.0	BW-16464	When the Get and Set Context Activities were used to retrieve contents of the of the SOAP header, which also included the WS-Security structure, the attribute `wsu:Id` of the element BinarySecurityToken would drop off.
		A property has been introduced for this. Set the property `java.property.ws.security.policy.retain.wsu.id.attribute=true`, to enable this fix.
5.13.0	BW-16416	For the **Soap Request Reply** activity, the elements SOAP-ENV:Body and wsu:Timestamp could not be signed.
5.13.0	BW-16369	**SOAP Request Reply** activity did not set the socket connection timeout and OS default value was used. The http thread was blocked by it for more than 10 minutes.
5.13.0	BW-16392	Using TIBCO ActiveMatrix BusinessWorks externally created SAML Assertions can now be signed. To sign the externally created SAML assertions, set `java.property.com.tibco.security.wss4j.EXPLICIT_ASSERTION_SIGNING` to `true`. The default value is `false`.

Closed in Release	Change Request ID	Summary
5.13.0	BW-16370	The **SOAP Request Reply** activity calling a web service over JMS timed out frequently when the output messages were not configured for the operation.
5.13.0	BW-16256	White spaces were deleted from the original XML input and output data when the activity validation was turned on.
		A property has been introduced for this.
		Set the property `java.property.com.tibco.xml.mapper.validation.preserveWhitespace=true` to preserve the white spaces. The default value of this property is `false`.
5.13.0	BW-16062	TIBCO ActiveMatrix BusinessWork was unable to sign or encrypt particular outbound message elements using Partner Link Configuration.
5.13.0	BW-15591	BusinessWorks did not support SOAP 1.1 binding for MTOM 1.1.
5.13.0	BW-15433	HTTP basic authentication in a BusinessWorks application failed with the Null Pointer Exception while using tibrvnative.jar.
5.13.0	BW-13405	BusinessWorks did not support setting the input and output HTTP headers in the **SOAP Request Reply** activity.
5.13.0	BW-9473	SOAP defaultFaultElement did not include the detail element in the schema.
TCP Palette		
5.14.0	BW-17158	The TCP receiver failed to establish a session if an exception occurred during socket creation.
		A property has been introduced for this.
		Set the property `bw.plugin.tcp.retryListeningOnError` to true, to enable this fix. The default value is `false`.
5.13.1	BW-16844	The **Read TCP Data** activity did not wait for the full timeout when the message extended across multiple packets.
XML Activities Palette		

Closed in Release	Change Request ID	Summary
5.14.1	BW-18549	Render XML activity overlooks the "Format using default namespace prefix" checkbox when Active Aspects is active.
5.13.1	BW-17042	The schema used on a shared variable resource was referenced automatically in the Shared Archive while creating the Enterprise Archive Designer on Windows.
		It did not reference the shared variable resource automatically while using Linux.

Known Issues

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

General

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 TIBCO 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: 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. (1-9ARJ0V)

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 checkbox 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 Business Studio, is mapped to a Partner Link Configuration in TIBCO Designer and the 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.jav
a: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 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-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 TIBCO 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-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>?useOldAliasMetada taBehavior=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 **JDBC 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 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:

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.

Internationalization

For this release of TIBCO ActiveMatrix BusinessWorks, the only platform on which internationalization features have been tested is Japanese Windows 2000. Also, integration tests have not yet been performed, so internationalization features have only been tested for TIBCO ActiveMatrix BusinessWorks as a standalone product.

TIBCO Messaging Encoding

Starting with the 5.0.1 release, only Multi-File projects are allowed. In the project creation panel, users are given the options to choose the encoding for the project (either ISO8859-1 or UTF-8). This encoding is *not* the persistent storage encoding of the project (that is always UTF-8), but is the TIBCO Messaging Encoding used for the communication between TIBCO product components. The communication channel can be either TIBCO Rendezvous or TIBCO Enterprise for JMS.

This TIBCO Messaging Encoding value can be set during the creation of a new project. Once a project is created, you can change the encoding value by selecting the root node in project tree. Then select the "Project Settings" tab in Configuration Window.

If you are familiar with TIBCO BusinessWorks Release 2.x, you can view this project encoding value as the equivalent of the encoding value configured using Repository Finder for Local Repository projects.

XML Messages using JMS or AE/RV Wireformats

The current release only supports UTF-8 encoding for XML messages. XML messages are configured in the following ways:

- TIBCO ActiveEnterprise activities can send or receive messages using AE XML wireformat.

- TIBCO ActiveEnterprise activities can use JMS as a transport, and this transport uses XML messages.

- TIBCO Rendezvous activities can specify that messages are RV XML format.

Non-ASCII data in XML messages using Latin-1 encoding is not properly handled. Therefore, if you choose to use an XML format, you must use UTF-8 as the message encoding.

Usage Notes

Double-Byte Characters in Filenames

Double-byte filenames can be used in filenames within activities (for text, binary, or XML or XDS files). However, project names cannot contain double-byte characters.

Double-Byte Characters in XPath Expressions

The TIBCO Designer GUI allows you to use XPath expressions in many locations (process parameters, return values, conditions in conditional transitions, and so on). Double-byte characters are supported in all these locations.

TIBCO Designer Display Font

In the TIBCO Designer **Edit > Preferences > View** tab, there are two kinds of fonts, UI Font type and Script Font type. Script Font type is used for display characters in the XPath Formula Editor and UI Font Type is used to display characters in other locations. If double-byte characters are displayed as rectangles, choose an appropriate font in the preferences dialog, then exit and re-open TIBCO Designer for the change to take effect.

ActiveEnterprise Adapter Palette

Through activities in this palette, TIBCO ActiveMatrix BusinessWorks can communicate with TIBCO adapters by way of different wire formats. All wire formats support transmitting non-ASCII data. The wireformat character encoding is determined by the TIBCO Messaging Encoding settings described in TIBCO Messaging Encoding on page 72.

EJB Palette

Non-ASCII data can be used as the EJB Remote call's parameters and return values for both stateful and stateless session beans.

The internationalization test of EJB is only conducted against BEA Weblogic 8.1 application server.

File Palette

In the File Poller and Wait for File Change activities, if the value for the Content as: field is text, the user can now select the encoding in the Encoding field. This encoding value is used to read the file contents. The Output tab will then show the encoding for the file contents in the encoding subelement of the fileContent element.

In the Read File and Write File activities, for text files the encoding to read/write the file can be specified in the Input tab in the optional Encoding field. The Output tab will then show the encoding for the file contents in encoding subelement of the fileContent element.

In JDK 1.3.1, Shift_JIS encoding is closer to MS932 encoding because it covers more special Japanese characters that are present in MS932. In JDK 1.4.1, Shift_JIS encoding is closer to SJIS because it no longer covers the special Japanese characters that are present in MS932.

FTP Palette

FTP palette now support files with both non-ASCII contents and filenames to be transmitted to and from a remote FTP server. Currently, internationalization features are tested only on UNIX-based FTP servers.

- FTP Put activity — this activity allows you to transmit files with non-ASCII data to an FTP server using non-binary mode. The source data could be retrieved from a file on disk or from process data. If the source data is from process data, you must specify the encoding for the remote file because the source data is always in Unicode, or the local system's default encoding is used for the remote file. Line endings on different operating systems are handled properly and automatically.

- FTP Get activity — this activity allows you to retrieve files with non-ASCII content from an FTP server using non-binary mode. The retrieved data could be written to a file on disk or to process data. In the later case, you must specify the encoding of the original file on the server so the activity can perform the conversion from the original encoding to Unicode. Line endings on different operating systems are handled properly and automatically.

- The activities of the FTP palette can support file names on the remote FTP server that use a different encoding than the local machine. When this is the case, the Remote File Name Encoding field in the FTP Connection must be configured properly.

HTTP Palette

The activities in the HTTP palette now support non-ASCII data in both GET and POST requests. Depending upon the configuration of the HTTP Request side, the encoding scheme of both a GET and POST request could be normally encoded or URL-encoded (defined in the W3C: Character Model for WWW 1.0). The HTTP Receiver side must be configured accordingly to accommodate these different encoding schemes.

Known Issues:

- HTTP Receiver — If the inbound HTTP POST request is URL-encoded and it contains non-ASCII data, and the HTTP Receiver's "Parse Post Data Method" field is unchecked, the Output "PostData" element will contain garbage data. **Workaround:** Check the "Parse Post Data Method" checkbox and specify output parameters for the parameters of the HTTP request. This allows the HTTP Receiver to properly parse the inbound URL-encoded data. The "PostData" element also returns the correctly decoded request.

- HTTP Receiver — If the inbound HTTP GET request is URL-encoded and it contains non-ASCII data, and the HTTP Receiver's "Parse Post Data Method" field is unchecked, the Output "QueryString" element will contain garbage data. **Workaround:** Specify output parameters for the parameters of the HTTP request. This allows the HTTP Receiver to properly parse the inbound URL-encoded data.

- HTTP Receiver — The process starter will not be able to receive and decode a request submitted by a browser (for example, Internet Explorer or Netscape) correctly if the request contains any non-Latin1 data. This is because the current implementations of the major Internet browsers do no include a Content-Type header in the outbound request. Thus, the HTTP Receiver always uses ISO8859-1 (Latin-1) encoding to decode the inbound request. **Workaround:** Workaround is available from TIBCO Support.

Java Code Activity

Hard-coded, double-byte data is now allowed in Java source code. Also, most Java locale-sensitive classes and methods are supported.

JDBC Palette

JDBC Query and JDBC Update now support double-byte data in table names, column names, and column values.

JDBC internationalization testing is only conducted against the Oracle 8.1.7 server. The server instance character sets that have been tested against include JA16SJIS, ECUJP, and UTF8. Both Oracle thin JDBC driver and DataDirect Oracle JDBC driver are tested.

Known Issues:

- The `tibcosoftwareinc.jdbc.oracle.OracleDriver` (the DataDirect Oracle JDBC driver) has problems under some circumstances. For example, if the database's encoding is EUC-JP, ASCII and non-ASCII data cannot be inserted correctly.

JMS Palette

This release of TIBCO ActiveMatrix BusinessWorks was tested only using the TIBCO Enterprise for JMS Server 3.1.0.

The TIBCO Enterprise for JMS server does not support double-byte topic or queue names.

Mail Palette

Mail Activities now support attachments that use CJK encoding.

RV Palette

RV activities now use the TIBCO Messaging Encoding as the wire encoding. You have to set the TIBCO Messaging Encoding to UTF-8 when you create a new project if you want to send/receive CJK characters using RV palette activities. The default project encoding value is ISO8859-1 that only supports Western Europeans characters including English. Please refer to .

SOAP Palette

The activities of this palette allow you to send and receive non-ASCII data in SOAP messages using UTF-8 encoding in document mode and RPC mode for both Literal and SOAP-Encoded message styles. The message character encoding is transparent, you do not need to configure the activities to obtain this functionality.

XML Activities Palette

XML Parse and XML Render activities now support XML files encoded in any IANA-compliant encodings.

Due to changes from JDK 1.3.1 to JDK 1.4.x, a shift_jis encoded XML file that contains special Japanese characters is handled differently by the Parse XML and Render XML activities. In TIBCO BusinessWorks Release 5.1.3 with JDK 1.4.x, when you parse shift_jis encoded XML files you should set Parse XML's forceEncoding value to MS932 or Windows-31J for binary mode, so that special Japanese characters can be parsed correctly. To render a shift_jis encoded XML file that contains special Japanese characters, you should use text mode in the Render XML activity. Then you can map the output xmlString from Render XML to a Write File activity with encoding value set to MS932 or Windows-31J.

Using Non-Default TIBCO Rendezvous Parameters

When you install TIBCO BusinessWorks version 5.3 and above, you can specify non-default TIBCO Rendezvous parameters for the TIBCO administration domain during installation.

- If you keep the default parameters, already installed adapter can join the TIBCO Administration Domain with no problems because both TIBCO Administrator and the adapter will then use the default TIBCO Rendezvous parameters.

- If you change the TIBCO Rendezvous parameters, you can use TIBCO ActiveMatrix BusinessWorks standalone with the new settings. Any adapters you install afterwards on the same machine will use the same settings.

If adapters need to join an administration domain using non-default TIBCO Rendezvous parameters, it is recommended you proceed as follows:

1. Install TIBCO Administrator and the adapter using the default TIBCO Rendezvous parameters.

2. Using the domain utility, change the TIBCO Rendezvous parameters for TIBCO Administrator to the desired settings.

3. Using the domain utility, change the TIBCO Rendezvous parameters for the adapter to the desired settings.

The domain utility and associated documentation is available in the tra/*version*/tools folder.

TIBCO Product Documentation and Support Services

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

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.

Product-Specific Documentation

The following documentation for this product is available on the TIBCO ActiveMatrix BusinessWorks page.

- *TIBCO ActiveMatrix BusinessWorks[TM] Release Notes*
- *TIBCO ActiveMatrix BusinessWorks[TM] Administration*
- *TIBCO ActiveMatrix BusinessWorks[TM] Concepts*
- *TIBCO ActiveMatrix BusinessWorks[TM] Error Codes*
- *TIBCO ActiveMatrix BusinessWorks[TM] Getting Started*
- *TIBCO ActiveMatrix BusinessWorks[TM] Installation*
- *TIBCO ActiveMatrix BusinessWorks[TM] Palette Reference*
- *TIBCO ActiveMatrix BusinessWorks[TM] 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 TIBCO ActiveMatrix BusinessWorks[TM], 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™: *TIBCO Runtime Agent supplies a number of TIBCO and third-party libraries used by TIBCO ActiveMatrix BusinessWorks*

- TIBCO Administrator™: *TIBCO Administrator is the monitoring and managing interface for new-generation TIBCO products such as TIBCO 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 Contact TIBCO Support

Get an overview of TIBCO Support. You can contact TIBCO Support in the following ways:

- For accessing the Support Knowledge Base and getting personalized content about products you are interested in, visit the TIBCO Support website.

- 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 TIBCO Support website. 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, visit TIBCO Community.

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