TIBCO AMX Business Works -6

Orientation:

* TIBCO ActiveMatrix BusinessWorks ™ is an integration product suite for enterprise, web, and mobile applications.



* The software allows you to create services and integrate applications using a visual, model-driven development environment, and then deploy them in the Active Matrix Business Works™ runtime.
* In TIBCO Active Matrix Business Works, applications can be developed using an application-oriented integration style or a service-oriented integration style.
* Processes are developed in TIBCO Business Studio and are saved in application modules. Application modules are equivalent to projects and are saved to folders on the disk. The TIBCO Business Studio workspace contains one or more application modules.
* An application module contains one or more BusinessWorks packages.
* A Business Works package contains one or more Business Works processes, which in turn are main processes or subprocesses.
* A process is stored as a single file with a .bwp extension.



* An application module contains a special folder called Processes. This folder contains the user created processes. In addition, an application module also contains special folders to store WSDL files, schemas, and shared resources.
* Resources: Contains shared resources used by activities in a process.
* Schemas: Stores XSD (schema) files.
* Service Descriptors: Stores WSDL files.

Create a service using- sc create (cmd)

* sc create <servicename> binpath= "<pathtobinaryexecutable>" [option1] [option2] [optionN]
* eg: sc create asperacentral binPath= "C:\TIBCOBW6\tea\2.1\bin\tea.exe" DisplayName= "Tibco BW6" start= auto

Task List & kill a PID (cmd)

* tasklist
* taskkill /PID 7777 /F

Tea Admin URL

* Exe file location: C:\TIBCOBW6\tea\2.1\bin\tea.exe
* Url: <http://localhost:8777/tea>
* user name: admin
* passwd: admin

For Agent subscription (cmd)

* In cmd type- C:\TIBCOBW6\bw\6.2\bin\bwadmin.exe
* mode enterprise
* In another cmd- C:\TIBCOBW6\bw\6.2\bin\bwagent.exe
* In admin cmd type- registerteaagent <http://localhost:8777/>
* After that open admin with above mentioned url and create Domain, AppSpace and AppNode.

To see agent swagger UI for creating domain, appspace, appnode… etc

* <TIBCO\_HOME>/bw6/6.x/bin: bwagent apiserver

Change the port for swagger doc(for debug)

* Go to run->debug configuration-> VM arguments for debugger configuration add "-Dbw.rest.docport=xxxx" where xxxx is the desired port number.

Start AppSpace & AppNode(cmd)

* Run bwadmin.exe as mentioned above.
* cd domainName
* start appspace appspacename
* start appnode appnodename

Clean the Project & check for impaired reason

* Project-> clean
* The 'la' command and check the details of your application to get an idea of the impaired state.

Swagger UI url for debugging the application

* Run BW application -> check the application and click ok.
* After that in console type lrestdoc and it will give the url for rest service.
* Copy paste the URL in browser and click on the application name and test the get/post method whatever is implemented.

Creating the ear

* Drag the \*.Application from project explorer to file explorer and it will automatically create \*.ear

Database .jar location

* C:\TIBCOBW6\bw\6.2\config\design\thirdparty\ojdbc6.jar
* Then go to C:\TIBCOBW6\bw\6.2\bin and type the below command in console
* bwinstall oracle-driver

Checkpoint configuration

* First run the script to create the table present in the location: C:\TIBCOBW6\bw\6.2\config\dbscripts\engine\oracle
* Go to location C:\TIBCOBW6\bw\6.2\config and make a copy of appspace\_config.ini\_ template and change the name to config.ini
* Set bw.engine.persistencemode = datastore|group
* If it is a datastore then provide database url, username and passwd.
* Finally in admin cmd type the command: config -d TestDomain -cf C:/TIBCOBW6/bw/6.2/config/config.ini appspace TestDomain

Backup&Restore configuration of Domain

* Backup command:

./bwadmin backup -s /tmp/backup\_domain.cmd domain DomainD1\_DEV

* Restore command:

./bwadmin -f /opt/tibco/bw/6.2/domains/backup\_domain.cmd

Migration of BW project from 5.X to 6.X

* In business studio go to project-> migrate BW projects.
* Select the 5.X project location and click migrate.

Project with subprocess after migration:

* Subprocess in BusinessWorks 6.x uses standardized concept of receiving and reply messages via a service.

Before Migration:



After Migration:



Post Migration Manual Task:

It is possible that one may encounter problem markers that relate to activity input mapping especially XPath constructor function errors due to mapping elements of different types in your project post migration. You can resolve these constraints by using the Show Check and Repair and Fix Type-

* Casting Errors functions.
* Show Check and Repair
* Procedure

1. To clear the problem markers in the migrated project, click the project.bwp.

2. Click the activity in your project and click the Input tab.

3. Click the Show Check and Repair icon .The Mapper Check and Repair window displays.

4. Do Check and Repair, click OK and run the project.



Fix Type-Casting Errors:

* To fix the construct functions errors, click the Fix Type-Casting Errors icon.

HTTP Persistent Connection:

**Procedure**

1. In the HTTP Client shared resource, Client.ClientProcess-Send-HTTP-Request-

HttpClientResource, provide the specified details in the following fields.

Field Value:

Maximum Total Connections 3

Maximum Total Connections Per Host 2

Connection Timeout (ms) 20000

2. Provide same HTTP Client shared resource Client.ClientProcess-Send-HTTP-Request-

HttpClientResource to the following activities in the process, ClientProcess.bwp.

a) Send-HTTP-Request-1

b) Send-HTTP-Request-1-1

c) Send-HTTP-Request-1-2

d) Send-HTTP-Request-1-3

HTTP Basic sample:

**Procedure**

1. Click on the activity Incoming-HTTP-request (HTTP Receiver) and click General tab.

2. In the Parameter table change the Parameter Cardinality from Required to Optional.



3. Click on the activity Send-Request-to-Wiki-News (Send HTTP Request) and specify the following 3 values on Input tab.



4. Click on the activity Send-Response-from-Wiki-News (Send HTTP Response) and specify the

value for Content-Type on the Input tab as shown in the following image.



JMS message selector project:

**Procedure**

1. Open QueueMessageSelector.bwp, click on JMS-Queue-Sender activity and click the advanced tab.

2. For the Application Properties Type, open the Select Schema Type Definition wizard and select JMSApplicationProperties.



3. Delete the Body element from Input tab in the JMS Queue Sender activity as 2 body elements will be generated after migration.



4. Provide value in the Body element.

5. Do Check and Repair to remove all the problem markers.

6. Run the process.

Java method project:

**Procedure**

1. Go to PublishBalance.bwp and do Check and Repair for the InvalidAcctExp and

publishException activities.

2. In the Mapper Check and Repair wizard, check for jmexample.InvalidAccountException.

3. Run the sample.





Mail with attachment:

**Procedure**

1. After migrating the project, select theSender.bwp process, click on Send-Mail activity and do Check and Repair.



1. Select the Receiver.bwp process and go to Write-binary-attachment-content activity's Input tab and do Check and Repair**.**



Custom Xpath migration:

**Procedure**

1. Export the Custom XPath function plug-ins into the Host repository. To do this, right-click on the XPath Function Plug-in, and choose Plug-in Development/Deployable Plug-ins and fragments.

2. Now choose Install into .host Repository and click Finish.You will be prompted to restart Business Studio. Restart and refresh your workspace. Thevalidation errors related to XPath functions will not be seen.

Installation by console mode:

./universtallinstaller –console

Copy files across the servers:

scp sourcefile username@desinationip:Destinationpath

X11 setup for Xming(For deployment interface):

* Run Xming on local windows machine
* In putty enable x11 and enter display location as localhost:0.0  and then login to the linux server
* Run yum install xorg-x11-apps.x86\_64 as root in the linux machine
* Set disply by running export DISPLAY=localhost:10.0
* Test with xclock or any other executable ike deisgner

Firewall-d commands:

The following files exist in /usr/lib/services/firewalld on APTIBAPP01FV and APTIBAPP02FV:

bw\_action.xml (Existing – 34002)

bw\_fsapi\_ft.xml (New - 44002)

bw\_fsapi\_action.xml (New - 34004)

bw\_fsapi\_action\_ft.xml (New - 44004)

The following commands have been executed on APTIBAPP01FV and APTIBAPP02FV

# firewall-cmd --reload

# firewall-cmd –add-service=bw\_fsapi\_ft –zone=public --permanent

# firewall-cmd –add-service=bw\_fsapi\_action –zone=public --permanent

# firewall-cmd –add-service=bw\_fsapi\_action\_ft –zone=public --permanent

Key import in cacerts command:

Your keytool command is wrong. Also you seem to be using an old certificate. Use the certificate by exporting it from the browser (for <https://10.4.124.99:9143/> URL) This is how you need to import into cacerts (example):

# cd C:\tibco\bw6\tibcojre64\1.7.0\lib\security

# C:\tibco\bw6\tibcojre64\1.7.0\bin\keytool.exe -import -trustcacerts -alias velocity\_dev -file velocity\_dev.cer -keystore cacerts

# C:\tibco\bw6\tibcojre64\1.7.0\bin\keytool -list -v -keystore cacerts

# C:\TIBCOBW6\tibcojre64\1.7.0\bin>keytool -list -v -keytool velocity\_dev.crt

In windows get the pid and kill the process:

