

Axiata Approval Workflow Deployment Guide – HUB - V1

Products:

wso2am-1.6.0
wso2bps-3.2.0

Step 01:

Set the carbon offset values for each instance as follows;

Filename: <CARBON_HOME>/repository/conf/carbon.xml

Carbon Product	Offset
wso2am-1.6.0	0
wso2bps-3.2.0	2

Step 02:

To enable workflow execution in API Manager, change the configurations as follows;

Filename: <APIM_HOME>/repository/conf/api-manager.xml

Section: <WorkflowExtensions>

- To enable application creation workflow;

Comment the below line;

```
<ApplicationCreation  
executor="org.wso2.carbon.apimgt.impl.workflow.ApplicationCreationSimpleWorkflowExecutor"/>
```

Uncomment the below section;

```
<ApplicationCreation  
  executor="org.wso2.carbon.apimgt.impl.workflow.ApplicationCreationWSWorkflowExecutor">  
    <Property  
name="serviceEndpoint">http://localhost:9765/services/ApplicationApprovalWorkFlowProcess/</Property>  
    <Property name="username">admin</Property>  
    <Property name="password">admin</Property>  
    <Property name="callbackURL">https://localhost:8243/services/WorkflowCallbackService</Property>  
</ApplicationCreation>
```

Entry/ Property Name	Value
executor	To set the application creation workflow executor customized for Axiata, replace executor

	“org.wso2.carbon.apimgt.impl.workflow.ApplicationCreationWSWorkflowExecutor” with “org.wso2.carbon.am.axiata.workflow.AxiataApplicationCreationWSWorkflowExecutor”.
serviceEndpoint	The endpoint URL of the “ApplicationApprovalWorkFlowProcess” which is deployed on BPS.
username	
password	
callbackURL	

- To enable subscription creation workflow;

Comment the below line;

```
<SubscriptionCreation
executor="org.wso2.carbon.apimgt.impl.workflow.SubscriptionCreationSimpleWorkflowExecutor"/>
```

Uncomment the below section;

```
<SubscriptionCreation
executor="org.wso2.carbon.apimgt.impl.workflow.SubscriptionCreationWSWorkflowExecutor">
  <Property
name="serviceEndpoint">http://localhost:9765/services/SubscriptionApprovalWorkFlowProcess/</Property>
  <Property name="username">admin</Property>
  <Property name="password">admin</Property>
  <Property name="callbackURL">https://localhost:8243/services/WorkflowCallbackService</Property>
</SubscriptionCreation>
```

Entry/ Property Name	Value
executor	To set the subscription creation workflow executor customized for Axiata, replace executor “org.wso2.carbon.apimgt.impl.workflow.SubscriptionCreationWSWorkflowExecutor” with “org.wso2.carbon.am.axiata.workflow.AxiataSubscriptionCreationWSWorkflowExecutor”.
serviceEndpoint	The endpoint URL of the “SubscriptionApprovalWorkFlowProcess” which is deployed on BPS.
username	
password	
callbackURL	

Step 03:

Configure both APIM and BPS instances to point to the same "WSO2_CARBON_DB" datasource. To setup APIM with MySQL database, follow the below guide;

<https://docs.wso2.org/display/AM160/Setting+up+with+MySQL>

Once the APIM "WSO2_CARBON_DB" is configured to work with MySQL, change the "WSO2_CARBON_DB" configurations of BPS to point to the same database.

Filename: <BPS_HOME>/repository/conf/datasources/master-datasources.xml

Step 04:

Copy MYSQL connector into both APIM and BPS to enable successful communication with the MYSQL database.

Filename: mysql_connector_java_<MYSQL_VERSION>_bin_<OSGi_VERSION>.jar
E.g.: mysql_connector_java_5.0.8_bin_1.0.0.jar

File Location: <AM_HOME>/repository/components/dropins/
<BPS_HOME>/repository/components/dropins/

Step 05:

Copy relevant endpoint references in to BPS.

The .epr files can be found at the below Git repository location;
<GIT_REPO>/<MIFE_BRANCH>/mife/workflow/endpoints/

The files need to be copied to the following location;
<BPS_HOME>/repository/conf/epr/

If the “epr” directory is not available in the above location, manually create it before copying the files.

The list of endpoint reference files related to each workflow process is as follows;

Workflow	Endpoint Reference
Application Approval	ApplicationService.epr
	ApplicationCallbackService.epr
Subscription Approval	SubscriptionService.epr
	SubscriptionCallbackService.epr

Step 06:

Deploy “AxiataWorkflowHandler” module.

“AxiataWorkflowHandler” is an OSGi bundle (E.g.: AxiataWorkflowHandler-1.0.0.jar) which is responsible for handling Axiata specific database invocations.

The module implementation can be found at the below Git repository location;
`<GIT_REPO>/<MIFE_BRANCH>/mife/workflow/AxiataWorkflowHandler/`

Checkout and build the code. Once the build is successful, the deployable artifact (E.g.: AxiataWorkflowHandler-1.0.0.jar) can be found at;
`/AxiataWorkflowHandler/target/`

Copy the above artifact in to below AM location;
`<AM_HOME>/repository/components/dropins/`

Step 07:

“AxiataWorkflowHandler” module is dependent on “Dbutils” module. Hence that module is also required to be available to facilitate the functionality.

Filename: Dbutils-<VERSION>-SNAPSHOT.jar
E.g.: Dbutils-1.0-SNAPSHOT.jar
File Location: <AM_HOME>/repository/components/lib/

Step 08:

Configure the proxy services used to perform Axiata specific database invocations. These proxy services expose the service implementations available in “AxiataWorkflowHandler” module.

The proxy configurations can be found at the below Git repository location;
`<GIT_REPO>/<MIFE_BRANCH>/mife/workflow/proxy-services/`

The files need to be copied to the following location;
`<AM_HOME>/repository/deployment/server/synapse-configs/default/proxy-services/`

The proxy service files related to each workflow process is as follows;

Workflow	Proxy Service
Application Approval	AxiataApprovalHandlerProxy.xml
Subscription Approval	AxiataSubscriptionApprovalService.xml

Step 09:

Start the APIM and BPS servers.

Step 10:

Deploy the approval workflow business processes in BPS.

The workflow artifacts can be found at below Git repository locations;

Application Approval Workflow

<GIT_REPO>/<MIFE_BRANCH>/mife/workflow/bpel/ApplicationApprovalWorkFlowProcess/

Subscription Approval Workflow

<GIT_REPO>/<MIFE_BRANCH>/mife/workflow/bpel/SubscriptionApprovalWorkFlowProcess/

In order to create the deployable process archive using above workflow artifacts, it is required to create a new BPEL workflow project using the above source in WSO2 Developer Studio and generate the deployable archives for each process. Refer below guide for steps;

<https://docs.wso2.org/display/DVS320/Creating+a+BPEL+Workflow>

Log in to BPS admin console and upload the processes.

Main → Manage → Processes → Add

Step 11:

Deploy the humantasks in BPS.

The humantask artifacts can be found at below Git repository locations;

Application Approval Humantask

<GIT_REPO>/<MIFE_BRANCH>/mife/workflow/humantasks/ApplicationsApprovalTask/

Subscription Approval Humantask

<GIT_REPO>/<MIFE_BRANCH>/mife/workflow/humantasks/SubscriptionsApprovalTask/

In order to be able to deploy the humantask artifacts, compress the above projects in to .zip archives.

E.g.: ApplicationsApprovalTask-1.0.0.zip

SubscriptionsApprovalTask-1.0.0.zip

Log in to BPS admin console and upload the humantasks.

Main → Manage → Human Tasks → Add