**Security Policy:**

* There are various types of security policies that the TIBCO API Exchange Gateway allows to secure a façade operation or a target operation.
* These security policies can be applied to the outgoing message forwarded to the service provider as well as incoming message received from the service consumer.

****

**Security Concepts:**

* Authentication (Basic, Username Token, security assertion markup language, x509, site minder): authentication means identifying the credential of the party who sent the request.
* Authorization: It is a process of authorizing a party who has been authenticated to access some request. Authorization checks the access/privilege of a party.
* Confidentiality: This ensures that the data is accessed to the intended party only by the help of encryption and decryption.
* Integrity: Integrity is a process to ensure that the data has not been tempered with. This is achieved by the help of digital certificate.
* Credential mapping: Credential mapping is a process of propagating an identity to the outgoing request.

Policy: - A policy specifies how the gateway enforces the security constraints applied to the façade or the target operation.

* Authentication service providers.
* Identity service providers.
* Trust service providers.

Shared Resources: - The above mentioned service providers can use more than one policy. So, that means these providers are shared among the policies as a collection of shared resources.

**Steps for implementing API Gateway:**

* Create a Rest web service in TIBCO BW.
* Install apache http server. (check for the 64-bit RV)
* Open APACHE\_HOME/conf/httpd.conf file for editing.
* Add the below line in the file and copy the file in the below location.
* Include ASG\_Home/modules/http\_server/apache/mod\_ASG.conf
* Modify the Listen port.
* To run, Open a console and navigate through Apache\_Home/bin and type httpd.exe
* Go to TibcoAPIHome->Asg->bin and type asg-configui.
* Now open the browser and type <http://localhost:9200/ConfigUI>
* Type the user name and passwd as ‘admin’
* Create a new project configuration in UI.
* Configure partner group and partners.
* Add partner to a partner group.
* Configure Façade operation and give any operation name, operation URI and operation service name.
* Configure the target group.
* Configure target operation and enter target operation name, type, URI, host and port.
* Configure the routing.
* Configure façade access under partner tab and always give partner as anon and configure rest of the required fields.
* Open a console and navigate till ASG\_Home/bin and type the below command to start application on asg engine.
* asg-engine –u asg-caching-core –a Application\_Name
* Run the rest service in debug mode or deploy the service.
* Now open any rest client tool (eg. WizTools etc) or any other client and give the façade operation URI also apache host and port number and also json payload.

**Steps to configure API Manager:**

A: Congfigure WAMP

1. Install wamp.
2. See it is running Green
3. Test apache port 80 . free or not  WAMP command (WAMP Menu > Apache > Services > Test Port 80)

Your port 80 is actually used by :

Server: Microsoft-HTTPAPI/2.0

* Stop this service and free the port 80. OR
* Change httpd.conf file edit : Listen <anyport other than 80> and ServerName localhost:<same port as given in listen>
* To test PHP is running or not : Open browser and hit localhost:<port name given>
* U should get php.index page.
* Make sure that the following lines are uncommented to ensure the following modules are loaded (the PHP installation will have already enabled the ph5\_module to be loaded).

LoadModule slotmem\_shm\_module modules/mod\_slotmem\_shm.so

LoadModule rewrite\_module modules/mod\_rewrite.so

LoadModule proxy\_module modules/mod\_proxy.so

LoadModule proxy\_connect\_module modules/mod\_proxy\_connect.so

LoadModule proxy\_http\_module modules/mod\_proxy\_http.so

* Add the following lines:

# Add API Exchange related proxy info - Begin

ProxyPass /apiKey http://$host:9122/apiKey

ProxyPassReverse /apiKey http://$host:9122/apiKey

ProxyPass /portalEvent http://$host:9122/portalEvent

ProxyPassReverse /portalEvent http://$host:9122/portalEvent

ProxyPass /asg/ http://$host:9122/asg/

ProxyPassReverse /asg/ http://$host:9122/asg/

ProxyPass /ConfigUI http://$host:9200/ConfigUI

ProxyPassReverse /ConfigUI http://$host:9200/ConfigUI

B. Set Up Mysql for asg database.

1. go to WAMP Menu > Apache > MySql > MySQL Console.

Console will open . for password hit enter (empty password )

If: window closed then do below thing :

Go to C:\wampserver\bin\mysql\mysql5.6.17 > open my.ini file at end add bind-address = 127.0.0.1

Now stop and start wamp server and do step 1.

Now u will get mysql> console

Now change password for root user :

SET PASSWORD FOR 'root'@'localhost' = PASSWORD('tibco@123');

Now Enter the following command to create a database for portal data:

CREATE DATABASE asg\_openapi DEFAULT CHARACTER SET utf8 COLLATE utf8\_general\_ci;

Now use database asg\_openapi and create tables related to asg\_openapi.sql file

Mysql>source path of the .sql file.

Task C Download and Install the Joomla Adapter Code

1. Download TIB\_api-exchange-joomla-adapter\_2.1.1.zip from the GitHub repository at the following location: <https://github.com/API-Exchange/JoomlaAdapter/releases/tag/v2.1.1>
2. Extract the contents of the zip file to a temporary folder.
3. Copy the contents of both folders:
4. •Copy the contents of /joomla to C:\WAMP\www.
5. • Copy the contents of / adapter /joomla to C:\WAMP\www.

Copy and replace in case of popup comes

Start php u should get joomla welcome page!

Complete these steps to configure Joomla:

1. To access Joomla, go to the following URL:

http://<hostname>.<domain.name>

2. Enter the following information:

— Site Name Enter the site name for the portal.

— Admin email Enter the email for the site administrator

— Admin Password Enter the admin password, and then confirm it in the

Confirm Admin Password field.

3. Scroll down to the Database configuration area.

4. In the Database Type field, from the pull-down list, choose MySql.

5. In the Host Name field, enter localhost.

6. Enter a username and password for the database user.

7. In the Database Name field, enter asg\_openapi.

8. Make sure that the value in the Table Prefix field is openapi\_ .

9. Click Next.

10. Review the information on the Finalisation window.

11. Click the Remove installation folder button.

The installation is now complete.

Now Login in Joomla admin. By clicking administrator in that page.

Click on extension-> extension manager

Upload and install both the zip file present under cobalt folder.

Upload and install adaptor->sql –scripts->baseline and seed data-> com.baseline

If Joomla is displaying error :

Go to Joomla Manager > System> Global configuration > Error Reporting > Make it None and save and close.

Install api gateway and manager in same home directory.

asg-portal-engine –a PortalProperty

to start the engine.