# Overview of APIman

APIman is a management API system, which acts as a gateway to services provided by any organization.

APIman has the following three layers:

* Organization: Contains all APIs, plans, and policies provided by a company. It can match a whole organization or a part of it.
* Plan: Defines the level of services provided through policies. With plans, you can define multiple different levels of service for APIs, based on policies.
* Policy: Defines the action performed by APIman gateway when a request for a service arrives.

You can use Apiman as a gateway which provides centralized governance policy configuration, tracks APIs and consumers of those APIs, eases sharing and discovery of APIs, and leverages common policy configuration across different APIs.

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# Installing APIman

The latest version of APIman can be downloaded and installed on WildFly 10. Upon installing, you can start the server.

Perform the following steps to download and install the latest version of APIman and start the server:

1. Download WildFly application server.
2. Patch the application server with a ZIP file to add modules and web applications, which are the UI of APIman.

**Note:** If you have already downloaded and installed WildFly 10, download the Apiman overlay ZIP file: <http://downloads.jboss.org/apiman/1.2.6.Final/apiman-distro-wildfly10-1.2.6.Final-overlay.zip>.

Run the following command to unzip the file:

*$ unzip apiman-distro-wildfly10-1.2.6.Final-overlay.zip -d wildfly-10.0.0.Final*

1. Start the APIman server.

Run the following commands to start the server:

$ cd wildfly-10.0.0.Final/bin

$ ./standalone.sh -c standalone-apiman.xml

# Configuring API Provider

Perform the following steps to configure an API provider:

1. Click **New user? Register**.
2. Fill in the form with details of Producer (API Provider) such as username, first name, last name, email, and password.
3. Re-enter the password to confirm.
4. Click **Register** to register as a producer. Upon registering, define the organization, plan, and policy.
   1. Login as a producer with the credentials provided during registration.
   2. Upon logging in to APIman, define your organization.
      1. Under **New Organization** tab, enter the name of the organization.
      2. Enter the description of the organization.
      3. Click **Create Organization** to create the organization.
   3. Upon creating the organization under **Plans** tab, enter the keywords to search a plan or filter by plan name.
      1. Click **New Plan** to select the plan.
      2. Enter the description of the selected plan.
      3. Click **Create Plan** to create the plan for your organization.
   4. Upon creating the plan under **Add Polic**y tab, define a new policy to the created plan.
      1. Select a policy type.
      2. Fill the required details.
      3. Click **Add Policy** to add the policy for the plan.
   5. Upon adding the policy under **New API** tab, register an API.
      1. Enter description of the API.
      2. Click **Create API**.
      3. Select or enter all the required details.
      4. Click **Save** to save and register the API.
5. Select the Make this API public check box to choose the API as public.
6. Complete by publishing the API.

# Configuring a Consumer

Perform the following steps to configure a Consumer:

1. Click **New user? Register**.
2. Fill in the form with details of Consumer such as username, first name, last name, email, and password.
3. Re-enter the password to confirm.
4. Click **Register** to register as a consumer. Upon registering, define the consumer organization and contract.
5. Create organization and API (follow Step 4 (a) and 4 (b) described above).
6. Click **Find/Consume** **an API** to find APIs.
7. Upon creating the organization and API under **API Details** tab, Click **Create Contract** to connect a client app to API through a plan.

**Note:**

* It is not mandatory to connect a client app if the API is public.
* When an API Contract is created, the system generates a unique API key specific to that contract. All requests made to the API by a Client App through the API Gateway must include this API key.

1. Upon creating the contract, return to your Consumer Organization and click on APIs to invoke the API.

# Testing APIman

Perform the following steps to test APIman:

1. Invoke the application through the APImain-gateway.

wget --no-check-certificate https://localhost:8443/apiman-*gateway*/Basicorganization/MyServlet/1.0?apikey=6143e048-2309-4262-8b53-54e69988186b

1. Add a basic authentication key to avoid anonymous usage of API.
2. Click **New Version** to create a new version of API.
3. Define a basic authentication policy.

**Note:** The policy is bound to a Datasource, which is defined in the WildFly application server that hosts APIman.

1. Enter Datasource JNDI name and the Query used to fetch and check the username or password.
2. Under **API Policies** tab, click **Add Policy** to add the policy.
3. Republish your APIs.
4. Upon republishing, re-check the API through the gateway. The user/password Basic Authentication challenge appears.
5. Enter the username or password combination registered in the USERS table of your database to access your API.