

OAUTH 2.0 by Implicit Grant Type

PavanKumar Meduri

Api Connect Developer
Miracle Software Systems, Inc.

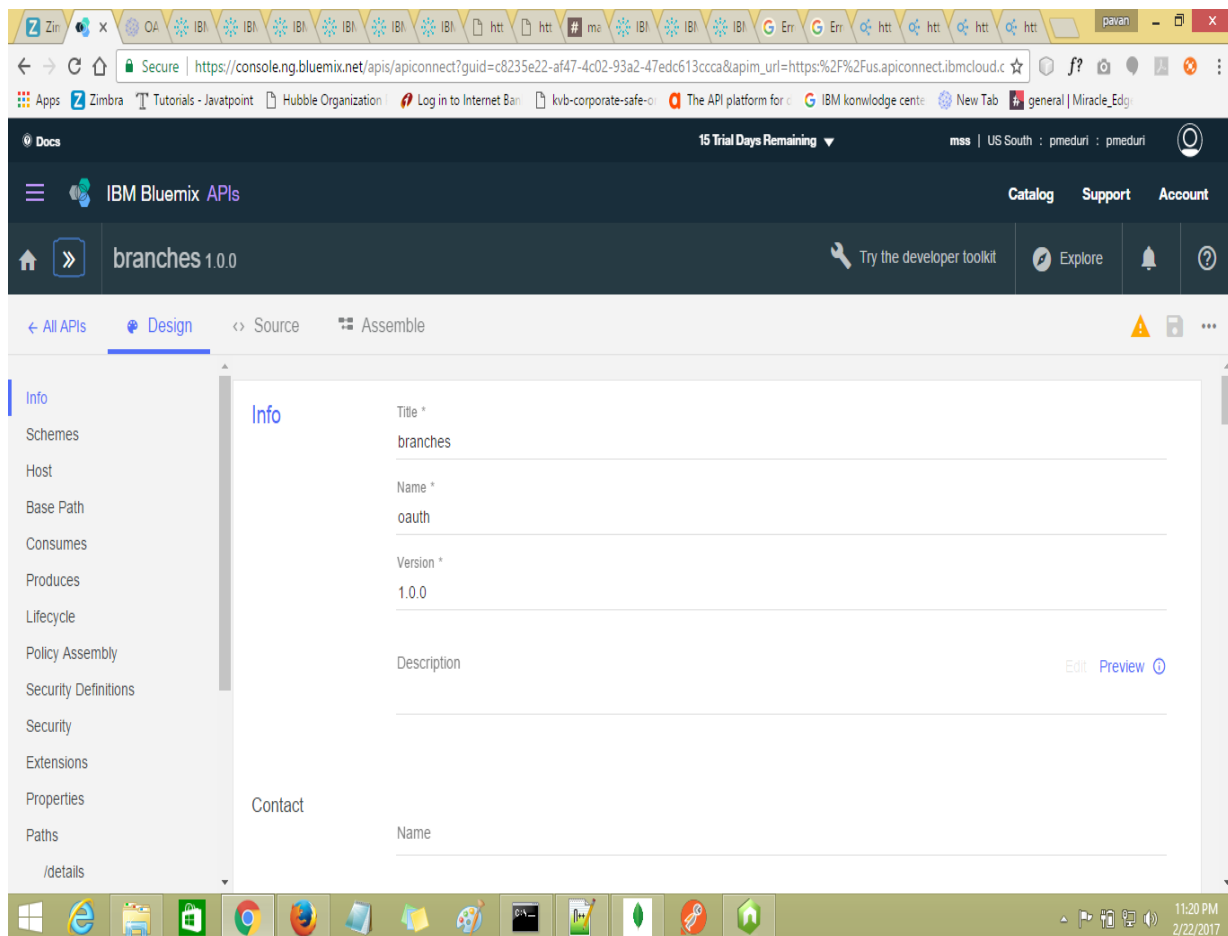
10-03-2017

For Implicit flow grant type we need to follow

- 1.Create an Invoke REST API.
- 2.Create An Oauth Provider API.
- 3.Create a product for these two API's.

Create an Invoke Rest API:

- 1.Login into the IBM BlueMix
- 2.Create an Rest API



The screenshot shows the IBM Bluemix APIs console interface. The top navigation bar includes 'Catalog', 'Support', and 'Account' links. The main header displays 'branches 1.0.0'. The left sidebar lists various API components: Host, Base Path, Consumes, Produces, Lifecycle, Policy Assembly, Security Definitions, Security, Extensions, Properties, Paths, /details, Parameters, Definitions, and branch. The 'Design' tab is active, showing the 'Consumes' section. Under 'Schemes', 'https' is selected. The 'Host' field is set to '\$(catalog.host)'. The 'Base Path' field is set to '/branches'. The 'Consumes' section shows 'application/json' selected as the media type.

The screenshot shows the IBM Bluemix APIs console interface, specifically the 'Policy Assembly' tab for the 'branches 1.0.0' API. The left sidebar lists various API components: Produces, Lifecycle, Policy Assembly, Security Definitions, Security, Extensions, Properties, Paths, /details, Parameters, Definitions, branch, address, Services, and Tags. The 'Policy Assembly' tab is active, showing the 'Lifecycle' section. The 'Phase' is set to 'Realized'. The 'Enforced' policy is selected, with the description 'Enforce API using a gateway'. The 'Testable' policy is also shown, with the description 'Allow the API to be tested using the developer portal test tool'. The 'CORS' policy is shown, with the description 'Enable CORS access control'. The 'Policy Assembly' section at the bottom has an 'Edit assembly' button.

The screenshot shows the IBM Bluemix APIs console interface. The top navigation bar includes 'Catalog', 'Support', and 'Account'. The main header displays 'branches 1.0.0' and a 'Try the developer toolkit' button. The left sidebar lists various API components: Lifecycle, Policy Assembly, Security Definitions (selected), Security, Extensions, Properties, Paths, /details, Parameters, Definitions, branch, address, Services, Tags, and Categories. The main content area is titled 'Security Definitions' and shows a form for defining a security parameter. The form includes fields for 'Name *' (clientidHeader), 'Parameter name *' (X-IBM-Client-Id), 'Located In' (Header), and 'Description'. A 'clientidHeader (API Key)' label is visible at the top of the form.

The screenshot shows the IBM Bluemix APIs console interface, specifically the details of a GET /details API endpoint. The top navigation bar includes 'Catalog', 'Support', and 'Account'. The main header displays 'branches 1.0.0' and a 'Try the developer toolkit' button. The left sidebar lists various API components: Lifecycle, Policy Assembly, Security Definitions, Security, Extensions, Properties, Paths, /details (selected), Parameters, Definitions, branch, address, Services, Tags, and Categories. The main content area shows the details of the GET /details endpoint, including fields for 'Add Tag', 'Summary', 'Branch details', 'Operation ID', 'Description', and 'Parameters'. A 'Deprecated' checkbox is visible next to the 'Operation ID' field. The 'Parameters' section indicates 'No parameters defined'.

The screenshot shows the IBM Bluemix APIs console interface. The top navigation bar includes 'Catalog', 'Support', and 'Account' links. The main header displays 'branches 1.0.0'. The left sidebar lists various API management options like 'Lifecycle', 'Policy Assembly', 'Security Definitions', etc. The 'Design' tab is selected, showing a table with a single entry: '200 OK' with a 'branch' schema. Below this, there are sections for 'Security' (with a checked 'Use API security definitions'), 'Consumes' (with a checked 'Use API consume types'), and 'Produces' (with a checked 'Use API produce types').

This screenshot shows the 'Definitions' tab for the 'branch' API. The 'Definitions' section is active, displaying a table with columns 'Name' and 'Type'. The 'branch' definition is listed with a type of 'object'. Below this, there is a 'format of branch field' section. The 'Properties' section is also visible, showing a table with columns 'Property Name', 'Description', 'Type', 'Example', and 'Actions'. The 'id' property is listed with a type of 'string'.

format of branch field

Properties

* Property Name	Description	Type	Example	Actions
id		string		
type		string		
Address		string		

Allow additional properties

address

Name *	Type
address	object

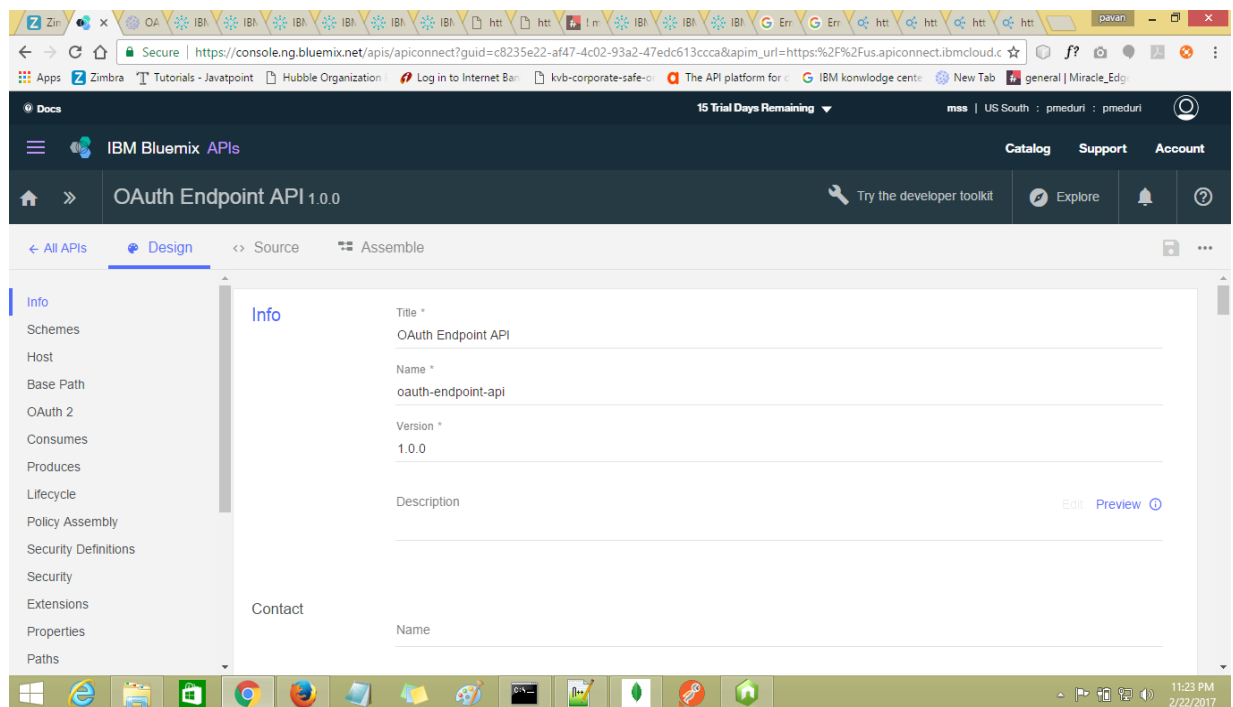
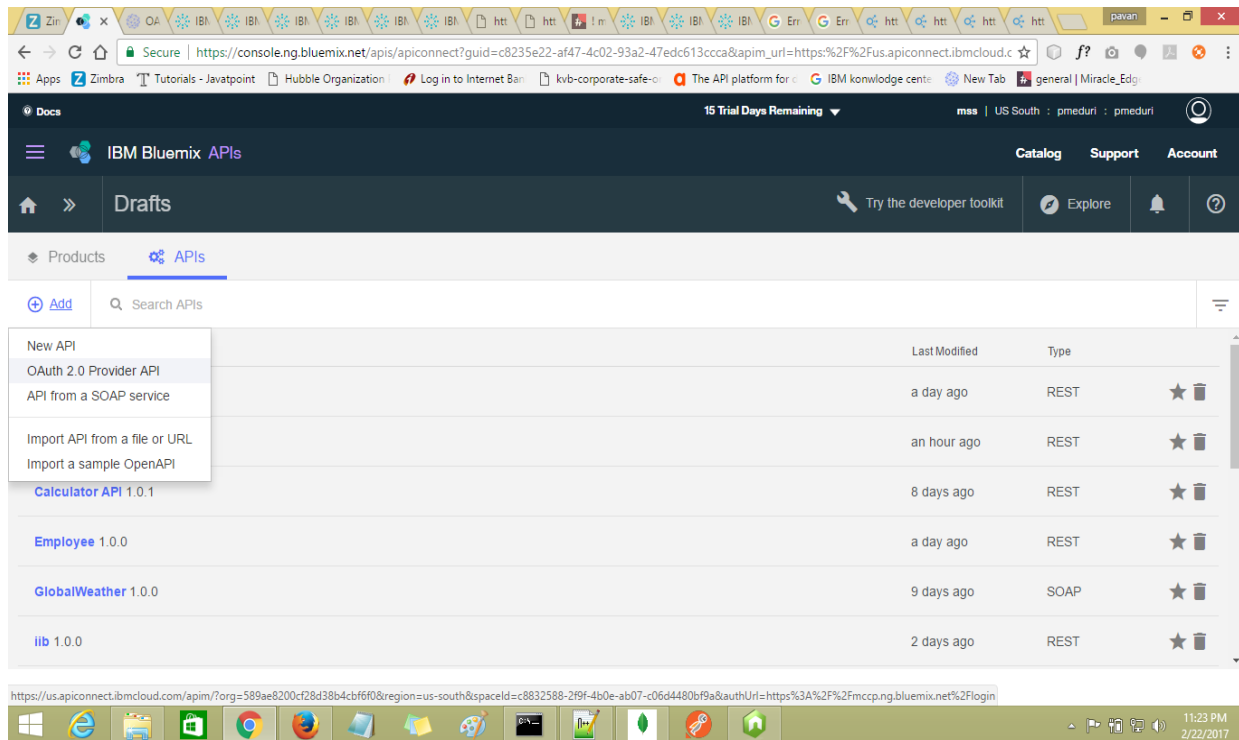
Description

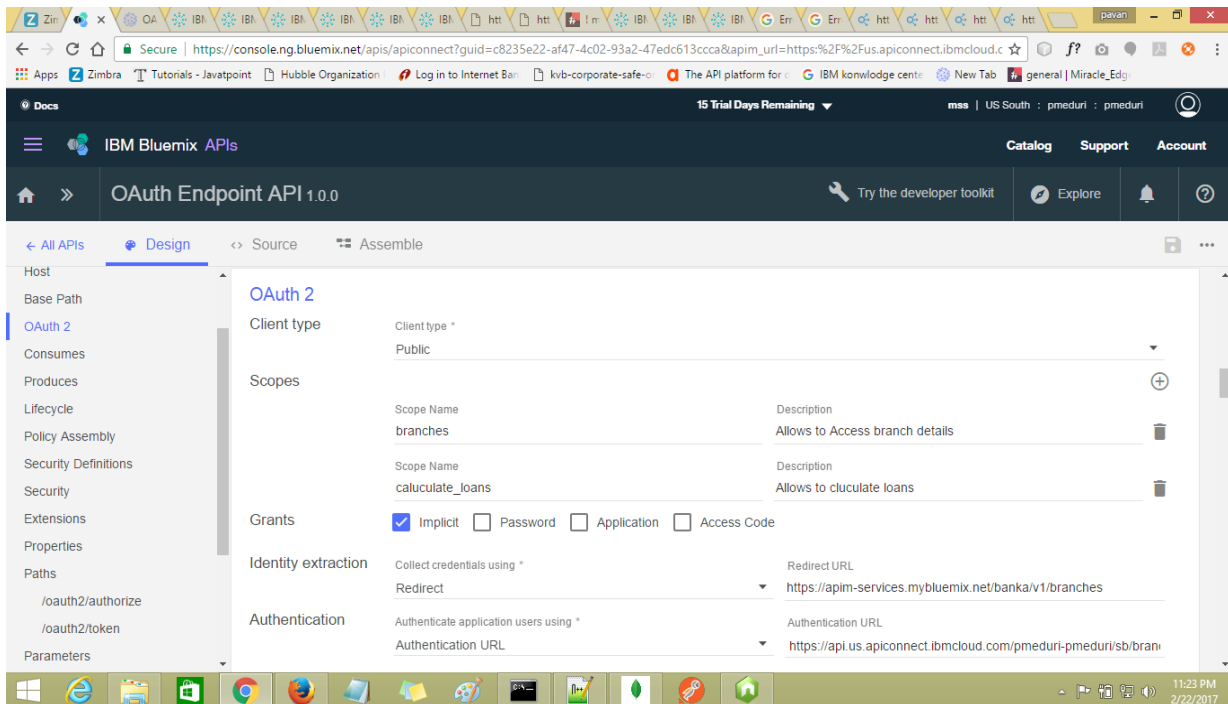
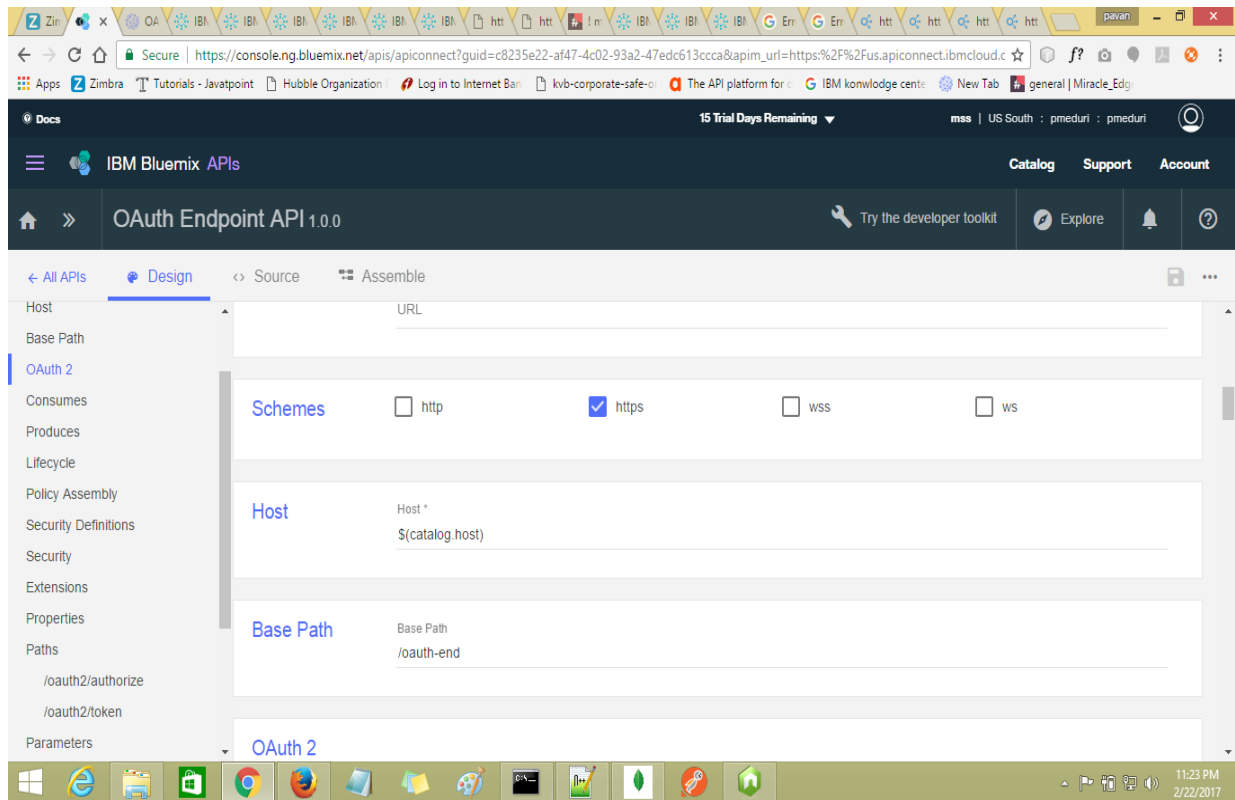
the format of the address object

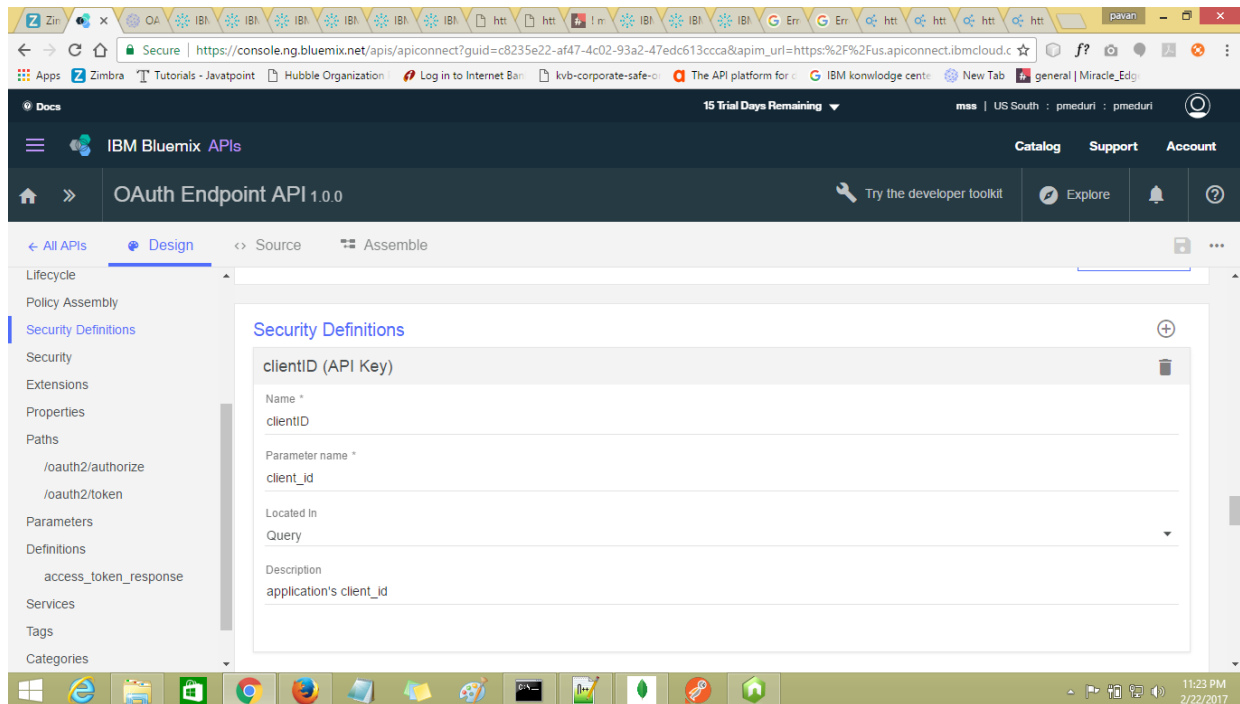
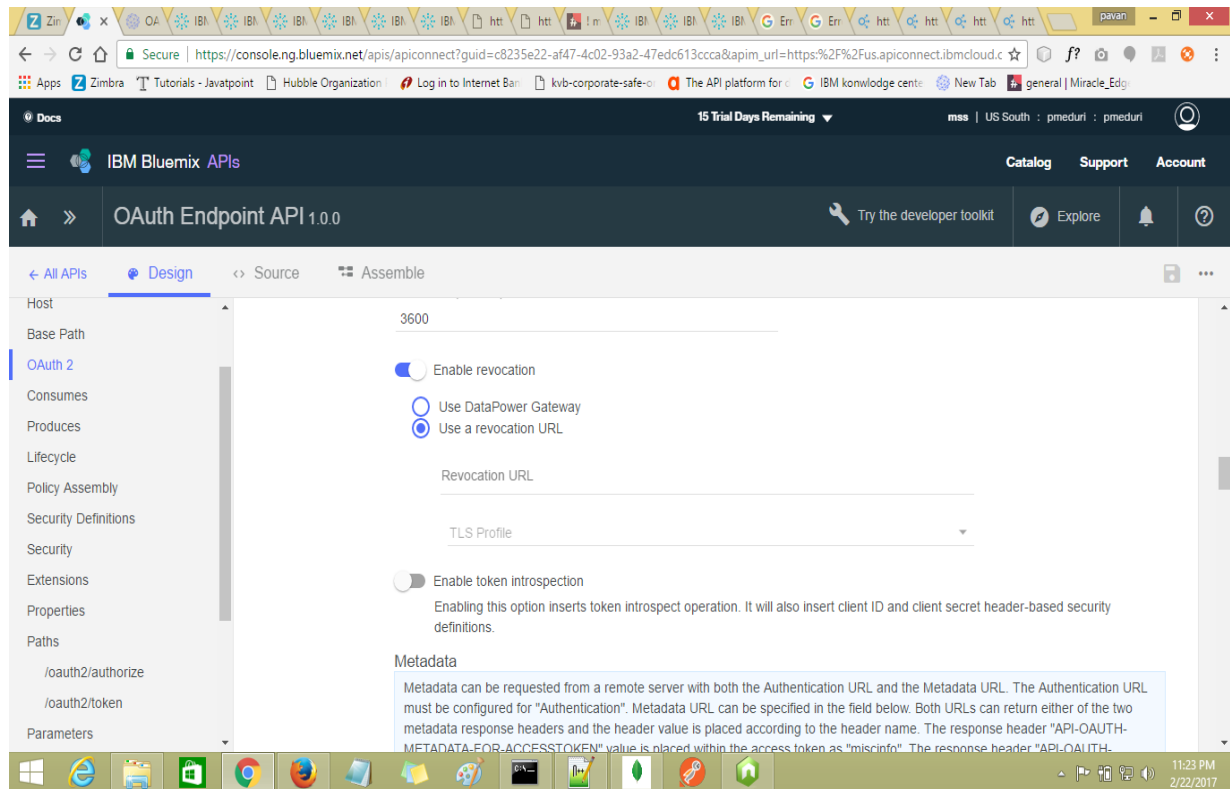
Properties

* Property Name	Description	Type	Example	Actions
zip_code		string		
state		string		

Creating the Oauth Provider API







This screenshot shows the IBM Bluemix APIs console interface. The browser address bar displays the URL: `https://console.ng.bluemix.net/apis/apiconnect?guid=c8235e22-af47-4c02-93a2-47edc613ccca&apim_url=https%2F%2Fus.apiconnect.ibmcloud.c`. The console header includes a 'Docs' tab, a '15 Trial Days Remaining' notification, and user information 'mss | US South : pmeduri : pmeduri'. The main navigation bar shows 'IBM Bluemix APIs' with links for 'Catalog', 'Support', and 'Account'. The breadcrumb trail indicates the current view is 'OAuth Endpoint API 1.0.0'. The left sidebar contains a 'Design' tab and a list of API components: Lifecycle, Policy Assembly, Security Definitions, Security, Extensions, Properties, Paths, Parameters, Definitions, Services, Tags, and Categories. The 'Paths' section is expanded, showing a list of API endpoints: `/oauth2/authorize` and `/oauth2/token`. The 'Parameters' section for `/oauth2/authorize` is visible, showing 'No parameters defined'. The 'Operations' section for `/oauth2/authorize` is expanded, showing a 'GET' operation and a 'POST' operation. The 'Operations' section for `/oauth2/token` is also visible, showing a 'POST' operation. The bottom of the console shows a Windows taskbar with various application icons and a system clock indicating 11:24 PM on 2/22/2017.

This screenshot shows the IBM Bluemix APIs console interface, similar to the one above. The browser address bar displays the URL: `https://console.ng.bluemix.net/apis/apiconnect?guid=c8235e22-af47-4c02-93a2-47edc613ccca&apim_url=https%2F%2Fus.apiconnect.ibmcloud.c`. The console header includes a 'Docs' tab, a '15 Trial Days Remaining' notification, and user information 'mss | US South : pmeduri : pmeduri'. The main navigation bar shows 'IBM Bluemix APIs' with links for 'Catalog', 'Support', and 'Account'. The breadcrumb trail indicates the current view is 'OAuth Endpoint API 1.0.0'. The left sidebar contains a 'Design' tab and a list of API components: Lifecycle, Policy Assembly, Security Definitions, Security, Extensions, Properties, Paths, Parameters, Definitions, Services, Tags, and Categories. The 'Parameters' section for `/oauth2/authorize` is visible, showing 'No parameters defined'. The 'Operations' section for `/oauth2/authorize` is expanded, showing a 'GET' operation and a 'POST' operation. The 'Operations' section for `/oauth2/token` is also visible, showing a 'POST' operation. The bottom of the console shows a Windows taskbar with various application icons and a system clock indicating 11:24 PM on 2/22/2017.

The screenshot shows the IBM Bluemix APIs console interface. The top navigation bar includes 'Catalog', 'Support', and 'Account' links. The main header displays 'OAuth Endpoint API 1.0.0'. The left sidebar lists various API components: Lifecycle, Policy Assembly, Security Definitions, Security, Extensions, Properties, Paths, Parameters, Definitions, Services, Tags, and Categories. The 'Definitions' tab is selected, showing a table with one entry: 'access_token_response' of type 'object'. Below this, a table lists properties for 'access_token_response', including 'token_type' (object).

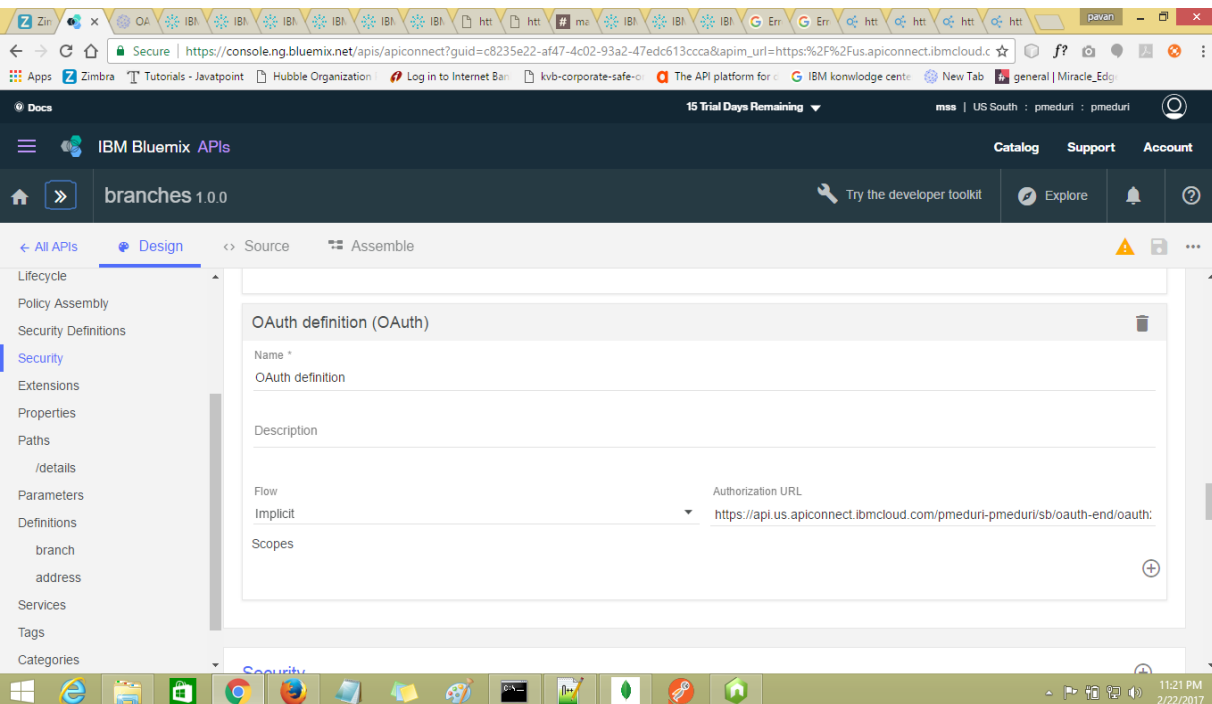
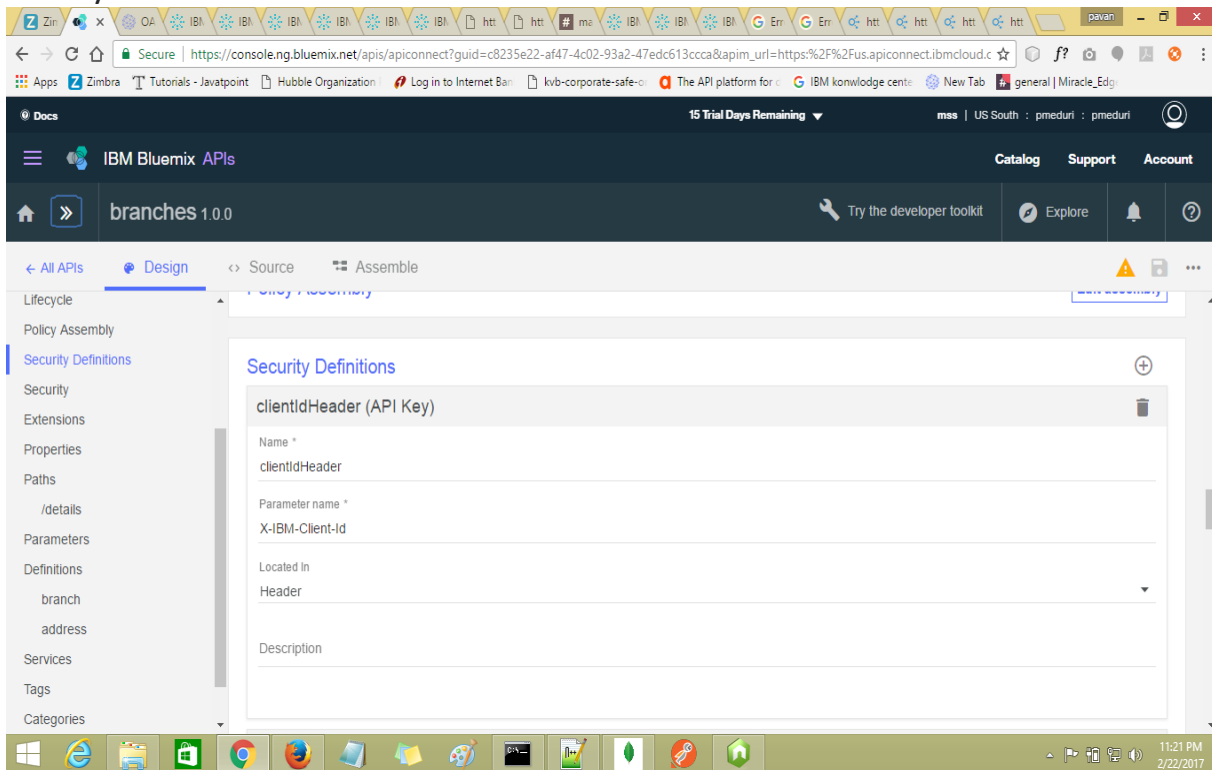
Name *	Type
access_token_response	object

* Property Name	Description	Type	Example	Actions
<input checked="" type="checkbox"/> token_type		object		

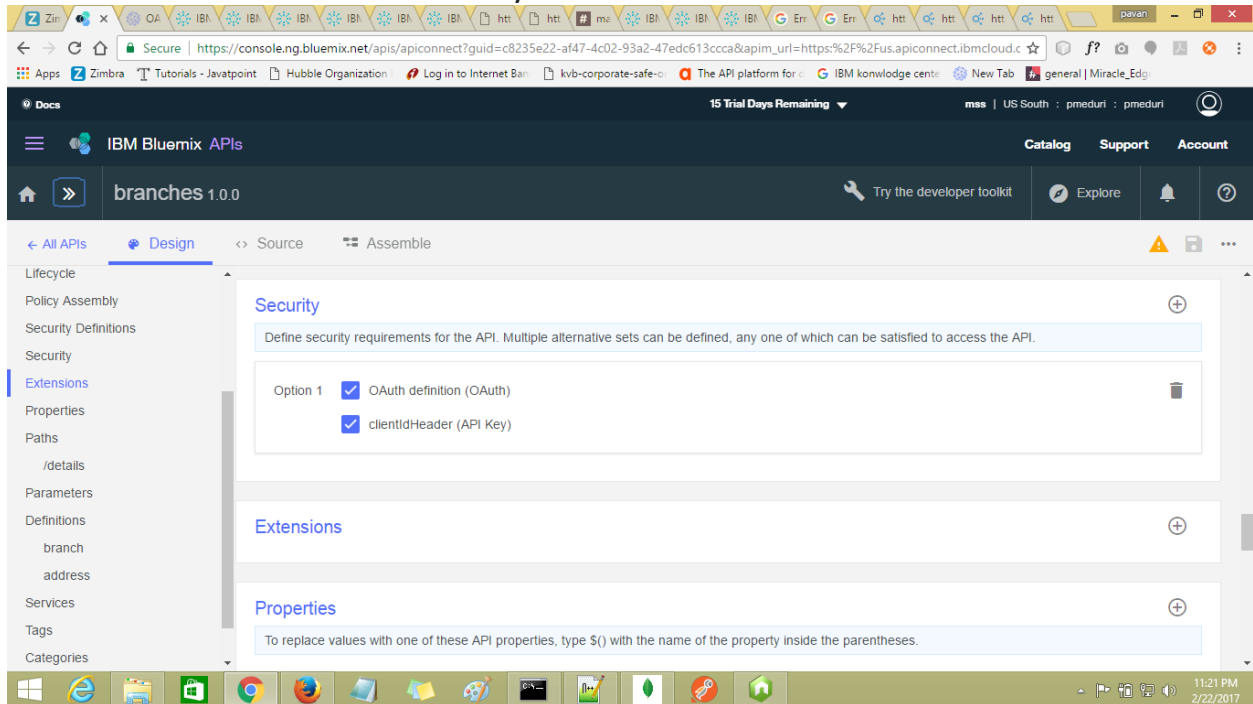
The screenshot shows the IBM Bluemix APIs console interface, specifically the 'Properties' tab for the 'access_token_response' API. The table lists several properties with their names, descriptions, types, and actions.

* Property Name	Description	Type	Example	Actions
<input checked="" type="checkbox"/> token_type		object		
<input checked="" type="checkbox"/> access_token		string		
<input checked="" type="checkbox"/> expires_in		integer		
<input type="checkbox"/> scope		string		
<input type="checkbox"/> refresh_token		string		

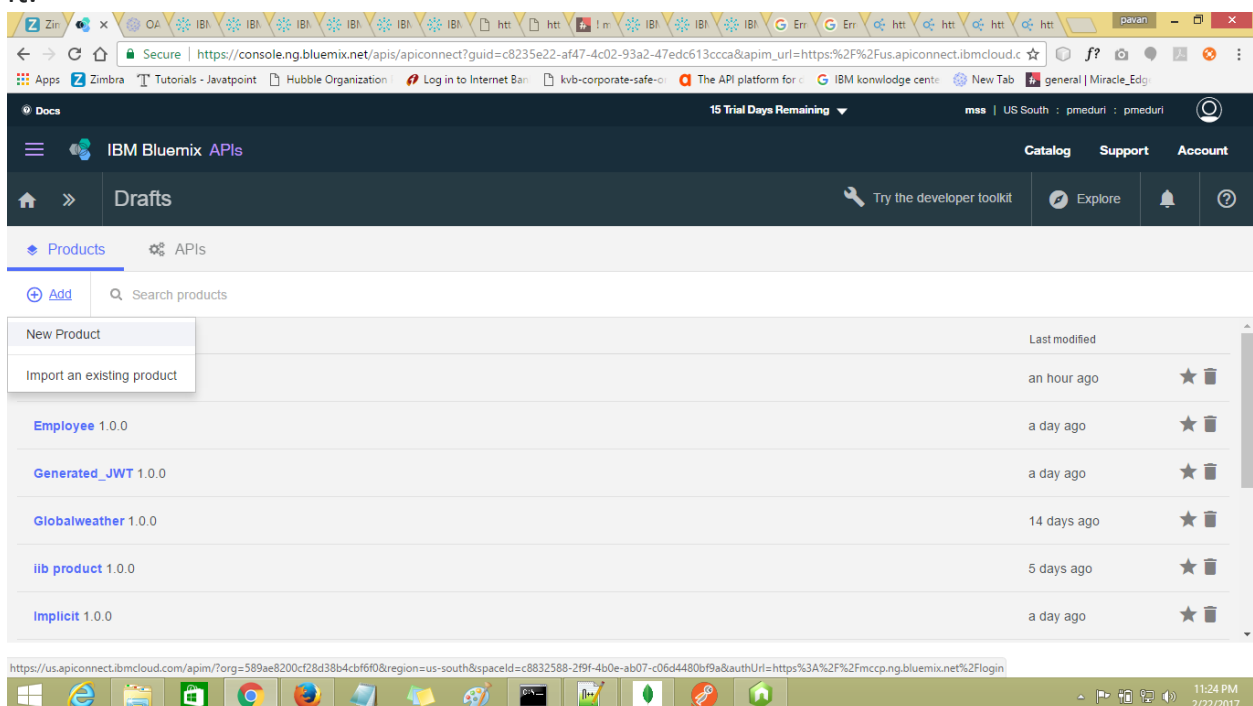
In Rest Invoke API click on **Security Definitions**, in that click on + sign for the new security Definition.

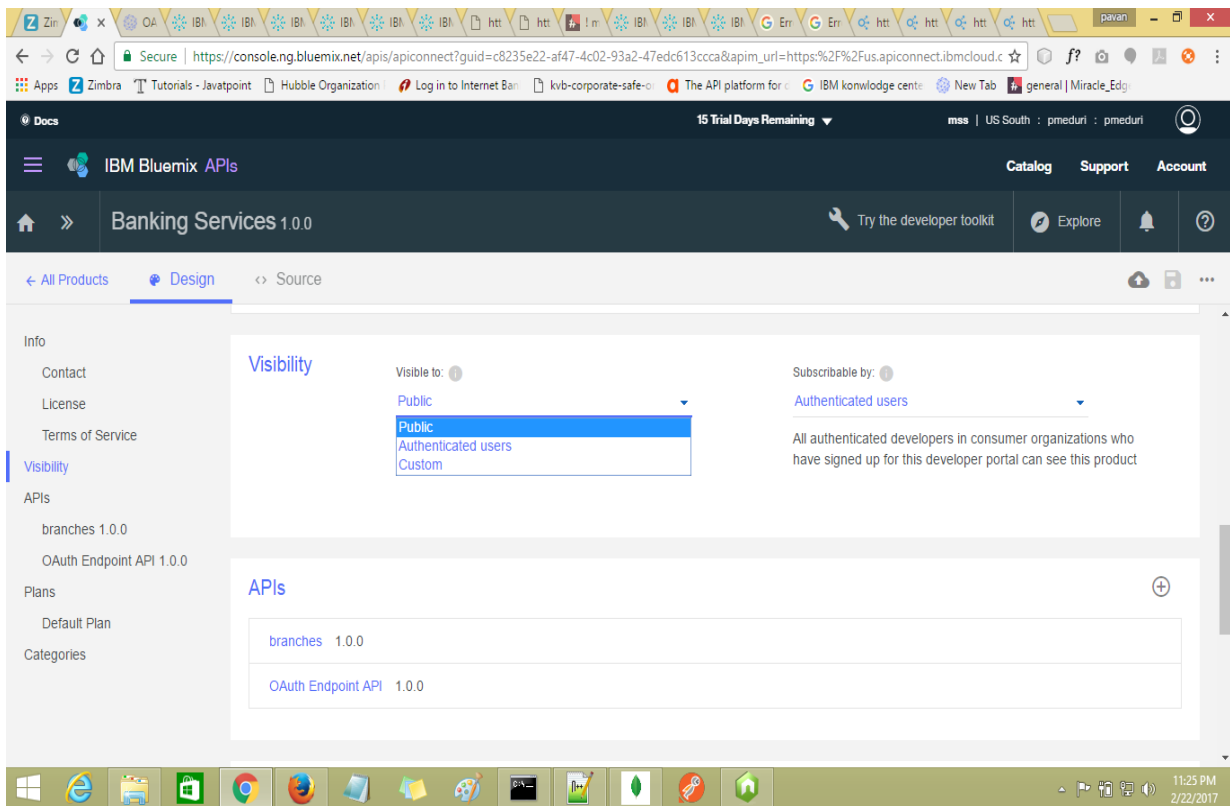
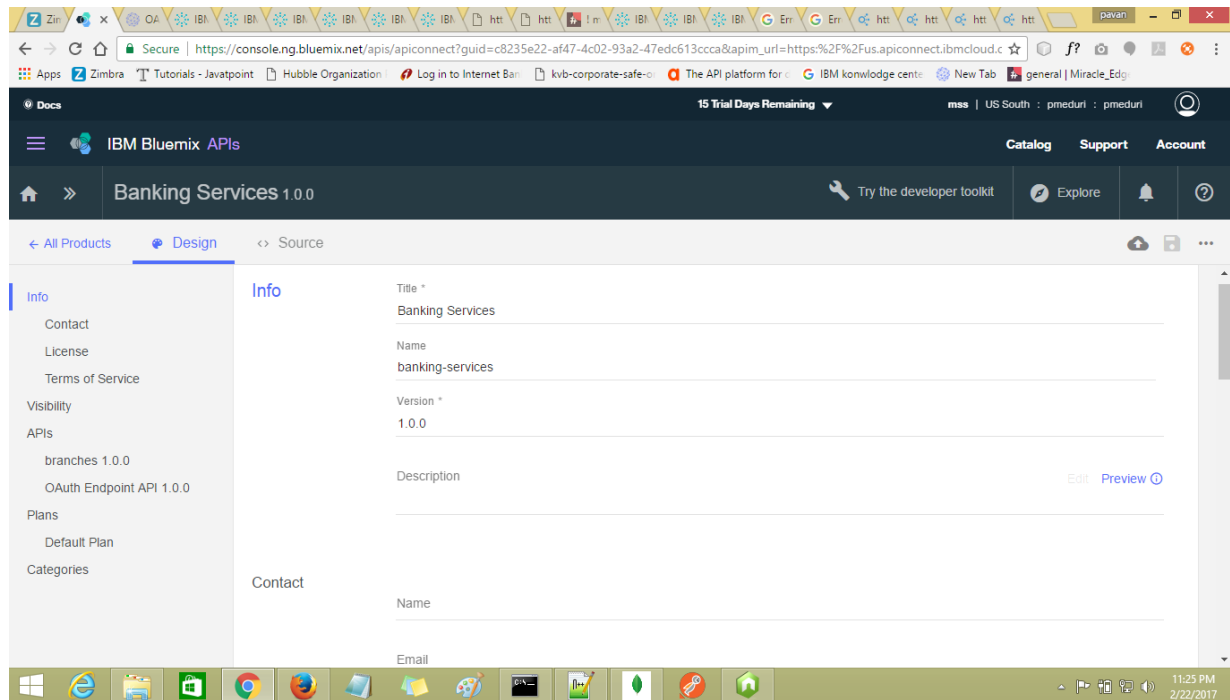


Make sure that these two Security Definitions are Enable.



Now Create the New product in Catalog and then add these particular API's into it.





IBM Bluemix APIs

Banking Services 1.0.0

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Account

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License

Terms of Service

Visibility

APIs

branches 1.0.0

OAuth Endpoint API 1.0.0

Plans

Default Plan

Categories

Visibility

Visible to: Public

Subscribable by: Authenticated users

All developers will be able to see this product

Authenticated users

Custom

APIs

branches 1.0.0

OAuth Endpoint API 1.0.0

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Plans

Default Plan

Categories

APIs

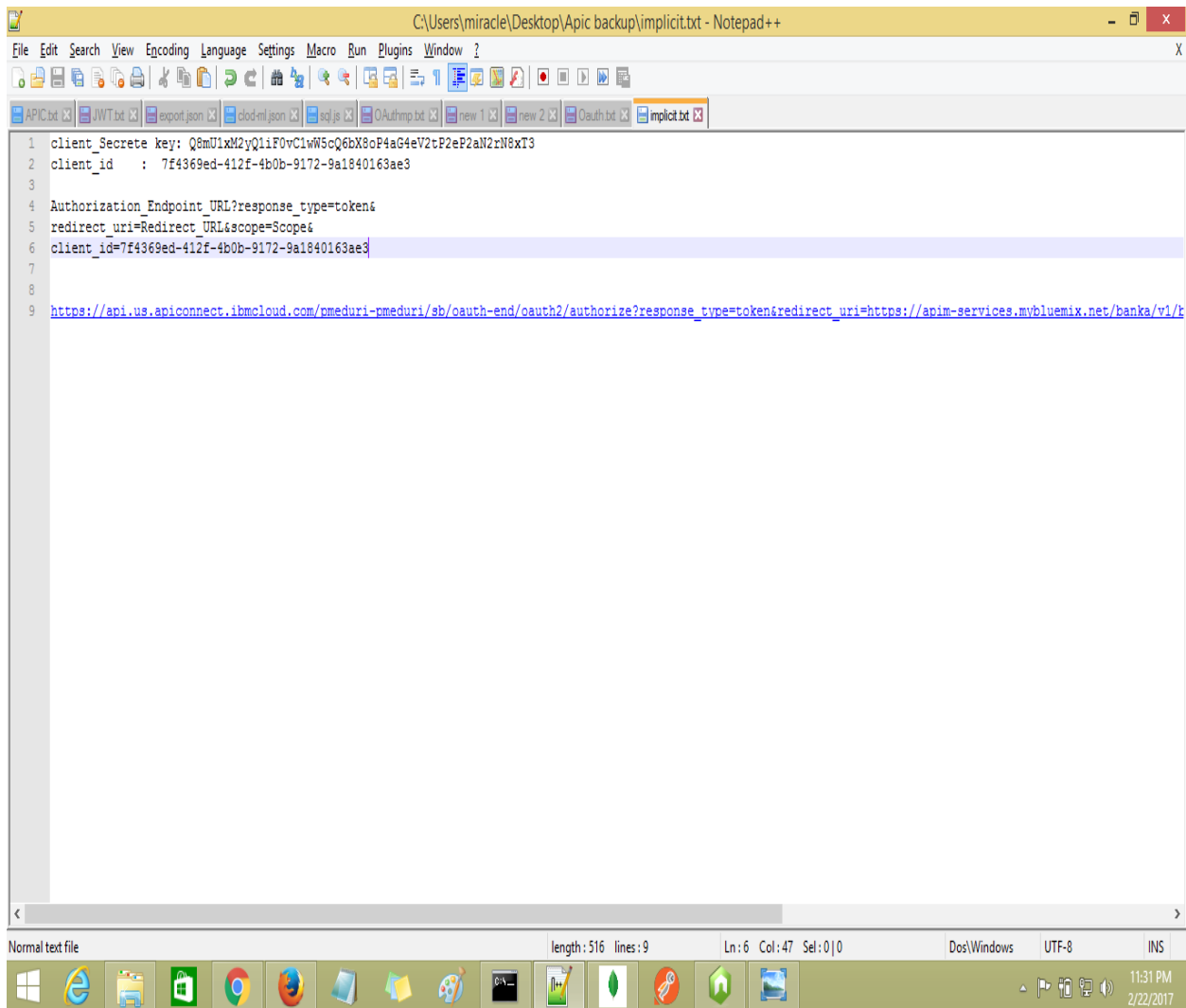
<input type="checkbox"/>	map	1.0.0
<input type="checkbox"/>	LDAP	1.0.0
<input type="checkbox"/>	Calculator API	1.0.1
<input type="checkbox"/>	GlobalWeather	1.0.0
<input type="checkbox"/>	temp_map	1.0.0
<input checked="" type="checkbox"/>	OAuth Endpoint API	1.0.0
<input type="checkbox"/>	TemperatureConversions	1.0.0
<input type="checkbox"/>	JWT_API	1.0.0
<input type="checkbox"/>	Public OAuth API	1.0.0
<input type="checkbox"/>	api1	1.0.0
<input type="checkbox"/>	iib	1.0.0
<input checked="" type="checkbox"/>	branches	1.0.0
<input type="checkbox"/>	policy	1.0.0

The screenshot shows the IBM Bluemix API console interface. The top navigation bar includes 'Catalog', 'Support', and 'Account'. The main header displays 'Banking Services 1.0.0'. The left sidebar lists various API endpoints, with 'Plans' selected. The main content area shows the configuration for the 'Default Plan'. The 'Rate limits' section is set to 10 calls per minute, with 'Enforce hard limit' checked. The 'Burst limits' section shows 'No burst limits defined'. The 'Approval' section has the 'Require subscription approval' checkbox unchecked.

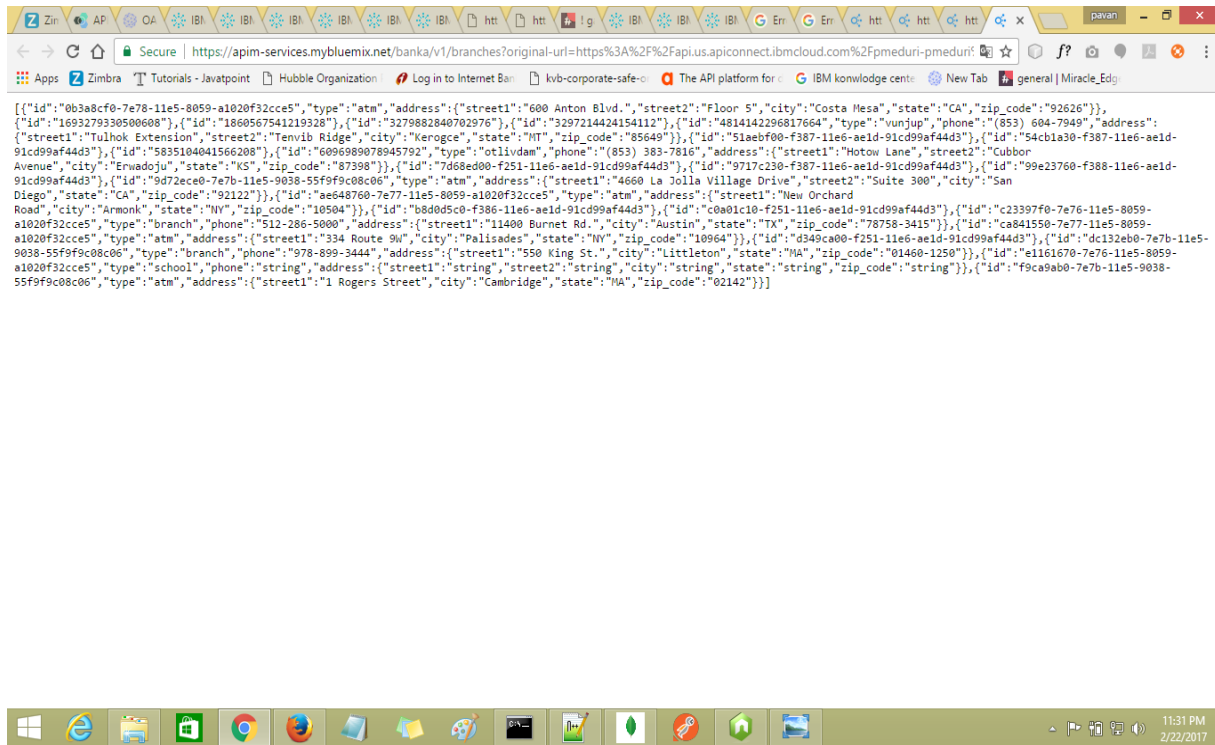
The screenshot shows the IBM Bluemix API console interface. The top navigation bar includes 'Catalog', 'Support', and 'Account'. The main header displays 'Banking Services 1.0.0'. The left sidebar lists various API endpoints, with 'Plans' selected. The main content area shows the configuration for the 'Default Plan'. The '2 APIs included' section lists 'branches 1.0.0' and 'OAuth Endpoint API 1.0.0'. The 'get/details' endpoint is selected with a rate limit of 10 calls per minute, and 'Enforce hard limit' is checked. The 'Require subscription approval' checkbox is checked.

After completion of these steps register these products into the APP. In that we need to give redirect URL in Redirect option.

After that



```
1 client_Secret key: Q8mU1xM2yQ1iF0vC1wW5cQ6bX8oP4aG4eV2tP2eP2aN2rN8xT3
2 client_id : 7f4369ed-412f-4b0b-9172-9a1840163ae3
3
4 Authorization_Endpoint_URL?response_type=token&
5 redirect_uri=Redirect_URL&scope=Scope&
6 client_id=7f4369ed-412f-4b0b-9172-9a1840163ae3
7
8
9 https://api.us.apiconnect.ibmcloud.com/cmduuri-cmduuri/sb/oauth-end/oauth2/authorize?response_type=token&redirect_uri=https://apim-services.mybluemix.net/banka/v1/k
```



Reference:

Creating an invoke REST API definition

>https://www.ibm.com/support/knowledgecenter/en/SSFS6T/com.ibm.apic.toolkit.doc/tutorial_apionprem_apiproxy.html

Securing an API by using OAuth 2.0

>https://www.ibm.com/support/knowledgecenter/en/SSMNED_5.0.0/com.ibm.apic.toolkit.doc/tutorial_apionprem_security_OAuth.html

Acquiring an access token for implicit authorization

>https://www.ibm.com/support/knowledgecenter/en/SSMNED_5.0.0/com.ibm.apic.toolkit.doc/tutorial_apionprem_security_OAuth_Implicit_Public.html#Implicit