

# Oracle® Banking Virtual Account Management API Security Guide



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# Preface

## Purpose

This guide provides security-related usage and configuration recommendations for Oracle Banking Virtual Account Management. This guide may outline procedures required to implement or secure certain features, but it is also not a general-purpose configuration manual.

## Audience

This guide is primarily intended for Developers for Oracle Banking Virtual Account Management and third party or vendor software's. Some information may be relevant to IT decision makers and users of the application are also included. Readers are assumed to possess basic operating system, network, and system administration skills with awareness of vendor/third-party software's and knowledge of Oracle Banking Virtual Account Management application.

## Scope

### Read Sections Completely

Each section should be read and understood completely. Instructions should never be blindly applied. Relevant discussion may occur immediately after instructions for an action, so be sure to read whole sections before beginning implementation.

### Understand the Purpose of this Guidance

The purpose of the guidance is to provide security-relevant code and configuration recommendations.

### Limitations

This guide is limited in its scope to the security-related guidelines for developers.

### List of Topics

This guide is organized as follows:

**Table 1 List of Topics**

Topics	Description
<a href="#">Securing API Services</a>	This topic provides the information about securing the API services.

# 1

## Securing API Services

This topic describes about securing API services.

Different applications deployed on disparate platforms and using different infrastructure need to be able to communicate and integrate seamlessly with Oracle Banking Virtual Account Management in order to exchange data. Oracle Banking Virtual Account Management Service API Gateway caters to these integration needs.

The integration needs supported by the Gateway can be broadly categorized from the perspective of the Gateway as follows,

- **Inbound application integration:** It is used when an external system needs to add, modify or query information within Oracle Banking Virtual Account Management.
- **Outbound application integration:** It is used when an external system needs to be accessed for processing transactions within Oracle Banking Virtual Account Management.
- [API Security](#)  
This topic describes about the API Security.
- [List of Services](#)  
This topic information about the List of API Services

### 1.1 API Security

This topic describes about the API Security.

Oracle Banking Virtual Account Management application provides the API Layer (also known as the Service API Layer), which is used by the external users to access the Oracle Banking Virtual Account Management functionalities.

Access to the API Layer is granted only through the following methods,

- OAuth with OAM (Oracle Access Manager)
- OAuth without OAM
- Oracle Banking Routing Hub

As stated before, in case the customer does not have OAM, an enterprise API Management layer should be implemented to protect the service API(s)

#### Register OAuth Clients with API Gateway

New Oath users can be registered with Oracle Banking Microservices Architecture using the below endpoint.

#### Sample Headers:

Header: **appId**: SECSRV001

Header: **Content-Type**: application/json

Header: **userId**: <USERID>

Header: **Authorization**: Bearer <<JWT Access Token>>

**Sample Request Body:**

```
{
  "UserList": [
    {
      "clientId": "<< clientId >>",
      "clientSecret": "<< clientSecret >>",
      "validity": "<< Validity in seconds >>"
    },
    {
      "clientId": "<< clientId >>",
      "clientSecret": "<< clientSecret >>",
      "validity": "<< Validity in seconds >>"
    }
  ]
}
```

**Modify Token Expiry of Registered OAuth Client**

Token expiry time can be updated using the below endpoint:

**Sample headers:**

Header: **appId**: SECSR001

Header: **Content-Type**: application/json

Header: **userId**: <USERID>

Header: **Authorization**: Bearer <<JWT Access Token>>

**Sample Request Body:**

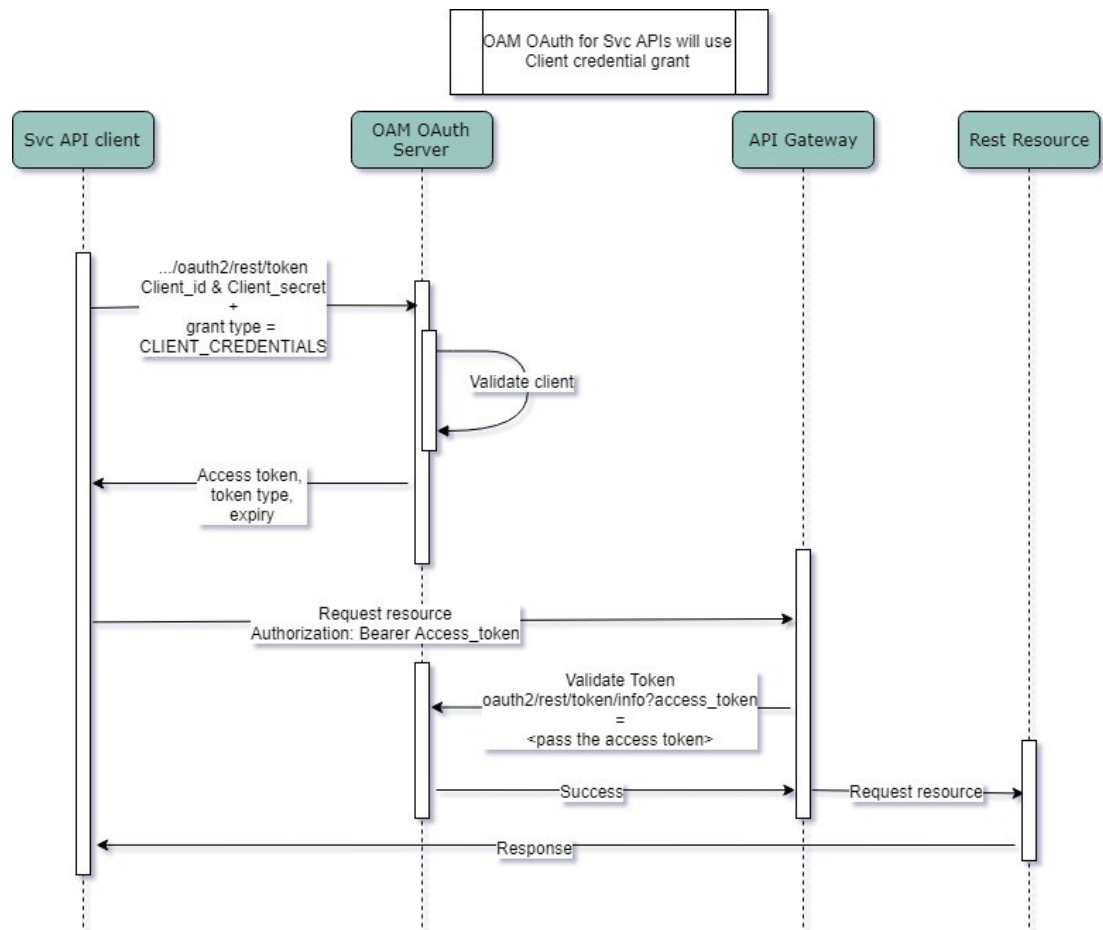
```
{"client_id":"<< clientId >>","validity":"<< Validity in seconds >>"}
```

**API Security with OAuth**

**OAuth with OAM**

The flow is depicted below

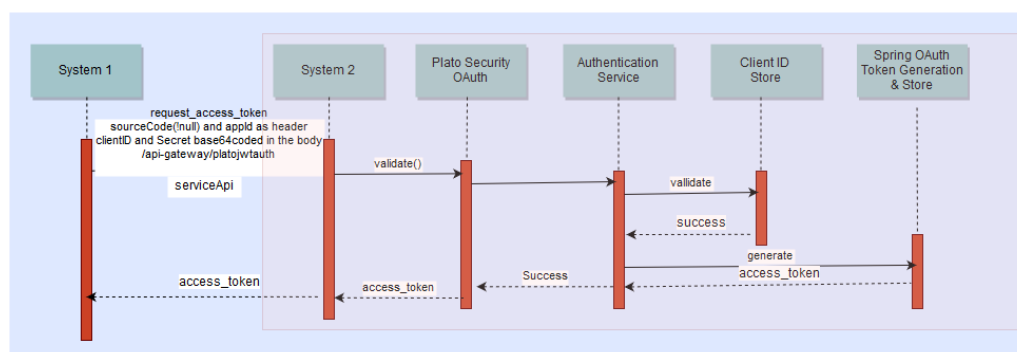
Figure 1-1 OAuth with OAM



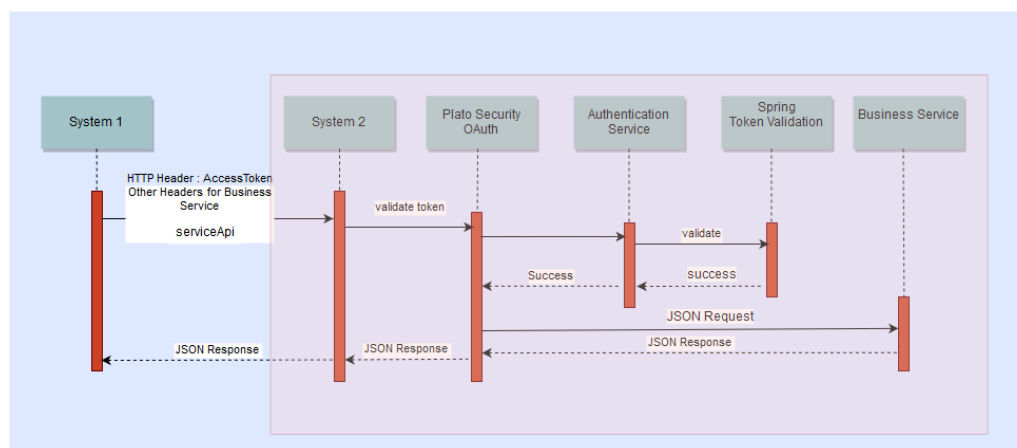
- API clients pass the client id & client secret and grant type as CLIENT CREDENTIALS. To get the access token, use the endpoint `/oauth2/rest/token`.
- API clients pass the access token in the authorization header as bearer token in their subsequent calls to access the Service API's.
- API Gateway validates the client access token on OAM Authorization server.
- If valid, it passes the request onto the Svc API's and gets the response.
- The client can refresh to get a new token before the current token expires. If the token expires, they can pass the client ID and client secret to get a new token.

#### OAuth without OAM

The flow for token generation is depicted below:

**Figure 1-2 OAuth without OAM - Token Generation flow**

The flow for accessing svc is depicted below:

**Figure 1-3 OAuth without OAM - Accessing svc flow**

- API clients pass the client id & client secret in the body and other required headers. To get the access token, use the below endpoint.  
  
`http://<<hostname>>:<<port>>/api-gateway/platojwtauth/.`
- API clients pass the access token in the authorization header as bearer token in their subsequent calls to access the Service API's.
- API Gateway validates the client access token on Authorization server.
- If valid, it passes the request on to the Svc API's and gets the response.
- The client can refresh to get a new token before the current token expires. If the token expires, they can pass the client ID and client secret to get a new token. Additional facilities of increasing the tokens are also provided.

### Access APIs through Oracle Banking Routing Hub

If the external services (services in bank or consulting) need to access APIs in Oracle Banking Microservices Architecture modules, the services will first have to generate an



access token using Oracle Banking Routing Hub endpoints and then use the token to authorize themselves to access the endpoints.

Refer to **Authentication** section in **Routing Hub Configuration User Guide** for the further details.

## 1.2 List of Services

This topic information about the List of API Services

Refer to the **REST API Documentation** for the detailed inbound APIs.

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