A close-up of a logo

Description automatically generated

**Generating OAuth Token and Using for Authentication in ServiceNow**

**Objective:** Generate an OAuth token to authenticate API requests and demonstrate its use in creating and updating incidents in ServiceNow.

**Prerequisites:**

* ServiceNow developer instance access
* Basic understanding of OAuth 2.0 authentication flow
* Java installed on your machine
* Maven installed on your machine

**Steps:**

1. **OAuth Token Generation:**
   * **Best Case Timing:** Typically within a few milliseconds to seconds, assuming minimal network latency and server load.
   * **Average Case Timing:** Generally a few hundred milliseconds to a second, depending on network conditions and ServiceNow instance response times.

**a. Obtain Client Credentials:**

* + Obtain client credentials (client ID and client secret) from ServiceNow instance OAuth application settings.

**b. Send Token Request:**

* + Use a HTTP POST request to ServiceNow token endpoint (/oauth\_token.do) with client credentials encoded in the request body.
  + Example:

POST <https://dev250030.service-now.com/oauth_token.do>

Content-Type: **application/x-www-form-urlencoded**

grant\_type=password &client\_id={client\_id}&client\_secret={client\_secret}

**c. Parse Token Response:**

* + Extract OAuth token (***access\_token***) from the JSON response.
  + Example JSON response:

{

"access\_token": "eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9...",

"token\_type": "Bearer",

"expires\_in": 3600

}

**a. Create Incident:**

* + Send a POST request to ServiceNow API (/api/now/table/incident) to create an incident.
  + Include the OAuth token in the Authorization header.
  + Example:

POST <https://dev250030.service-now.com/api/now/table/incident>

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

Authorization: Bearer eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9...

{

"short\_description": "Incident Title",

"description": "Incident Description"

}

**b. Update Incident:**

* + Send a PUT request to ServiceNow API (/api/now/table/incident/{incident\_id}) to update an incident.
  + Include the OAuth token in the Authorization header.
  + Example:

PUT [https://dev250030.service-now.com/api/now/table/incident/{incident\_id}](https://dev250030.service-now.com/api/now/table/incident/%7bincident_id%7d)

Content-Type: application/json

Authorization: Bearer eyJhbGciOiJSUzI1NiIsInR5cCI6IkpXVCJ9...

{

"short\_description": "Updated Incident Title",

"description": "Updated Incident Description"

}

1. **Error Handling:**
   * Implement error handling to manage token expiration (401 Unauthorized) and other potential API errors.
   * Refresh the token as necessary based on expires\_in value from the token response.

**Summary:**

* Generate an OAuth token using client credentials flow in ServiceNow.
* Use the OAuth token for authentication in creating and updating incidents via ServiceNow API.
* Monitor and optimize API request timings based on network conditions and ServiceNow instance performance.

Good Luck !