OAuth Configuration in ServiceNow

For Client and Admins

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Contents

1. About

To enhance the security of the ServiceNow instance in Equinor OAuth 2.0 will be included aklong with the basic authentication. This document explains about the configurations that needs to be made to use the APIs with basic OAuth 2.0 in ServiceNow. Also, explains the set up that needs to be done by the ServiceNow Admins.

2. For Clients

ServiceNow uses basic OAuth 2.0. Please ensure that you have a user name and strong password for Basic authentication to the instance exclusively created for the integration. Contact Equinor ServiceNow team if there is not user account.

2.1 Get Access token

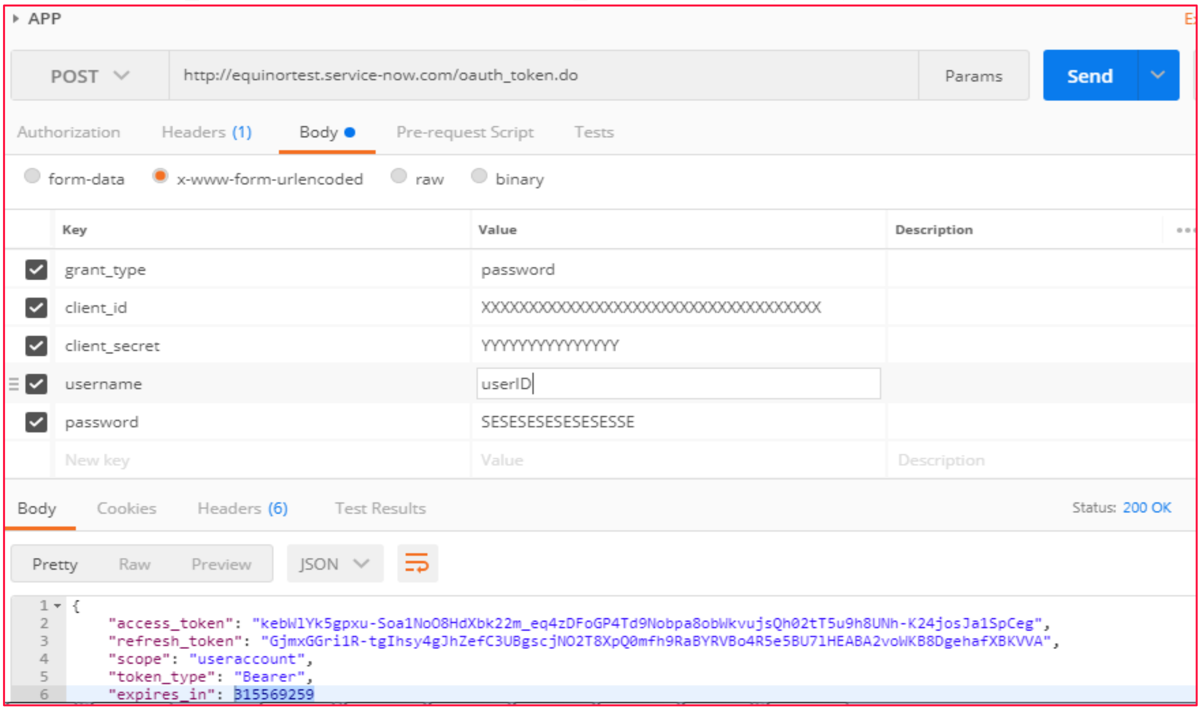
Request

Use the following details to get Access token

API Endpoint: https://INSTACENAME.service-now.com/oauth_token.do
Method: POST
Enter body parameters as given below
grant_type: password
client_id: will be shared by ServiceNow Team
client_secret: will be shared by ServiceNow Team
username: user name of the integration
password: password of the integration

Response

The response will contain the following:
access_token: token for authentication when using any ServiceNow API
refresh_token: Token to be used when the access token expires
expires_in: this is the time of the access_token that will get expired. This will be in seconds.



POST http://equinortest.service-now.com/oauth_token.do

○ form-data ● x-www-form-urlencoded ○ raw ○ binary

	Key	Value	Description
☑	grant_type	password	
☑	client_id	XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX	
☑	client_secret	YYYYYYYYYYYYYYY	
☑	username	userID	
☑	password	SESESESESESESESSE	
	New key	Value	Description

Body Status: 200 OK

JSON

```
{
    "access_token": "kebWlYk5gpxu-Soa1NoO8HdXbk22m_eq4zDFoGP4Td9Nobpa8obWkvujsQh02tT5u9h8UNh-K24josJa1SpCeg",
    "refresh_token": "GjmxGGri1R-tgIhsy4gJhZefC3UBgscjNO2T8XpQ0mfh9RaBYRVBo4R5e5BU71HEABA2voWKB8DgehafXBKVVA",
    "scope": "useraccount",
    "token_type": "Bearer",
    "expires_in": 315569259
```

2.2 Use refresh token to get new access token

Follow the below step to get the new access token by using refresh token received earlier.

Request

Use the following details to get Access token

API Endpoint: https://INSTACENAME.service-now.com/oauth_token.do

Method: POST

Enter body parameters as given below

grant_type: refresh_token

client_id: will be shared by ServiceNow Team

client_secret: will be shared by ServiceNow Team

refresh_token: refresh token received earlier

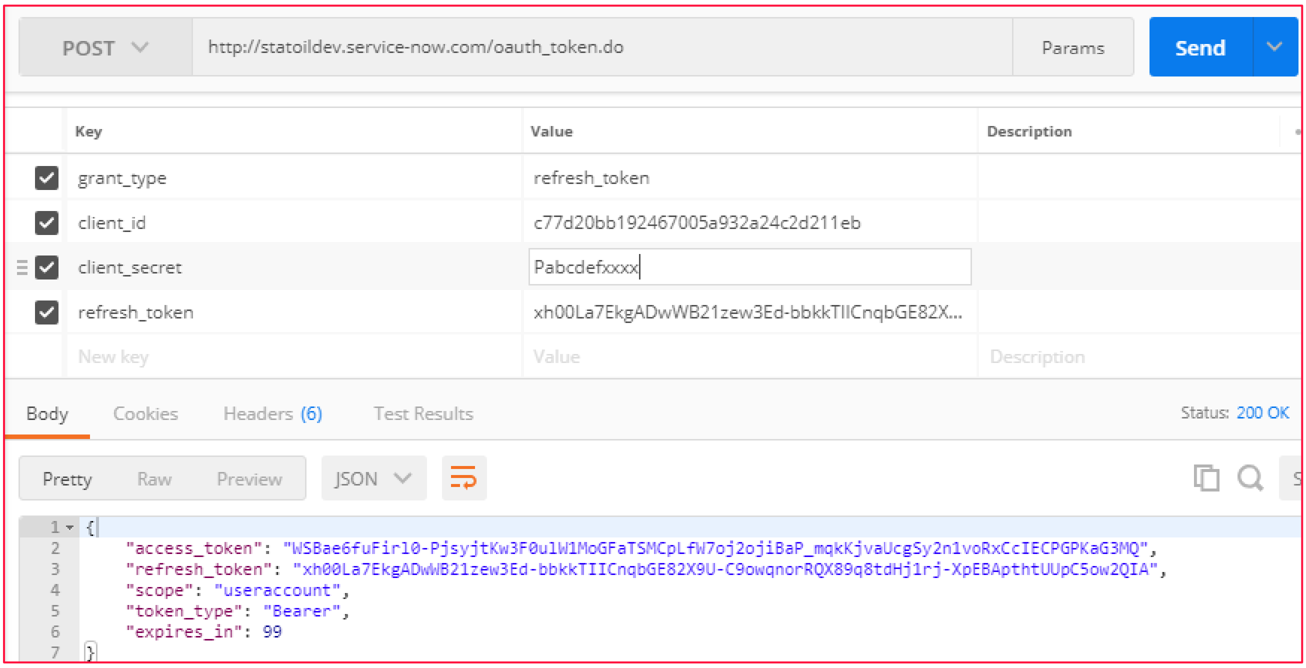
Response

The response will contain the following:

access_token: new token for authentication when using any ServiceNow API

refresh_token: Token to be used when the access token expires

expires_in: this is the time of the access_token that will get expired. This will be in seconds.



http://statoildev.service-now.com/oauth_token.do

	Key	Value	Description
☑	grant_type	refresh_token	
☑	client_id	c77d20bb192467005a932a24c2d211eb	
☑	client_secret	Pabcdefxxxx	
☑	refresh_token	xh00La7EkgADwWB21zew3Ed-bbkkTIICnqbGE82X...	
	New key	Value	Description

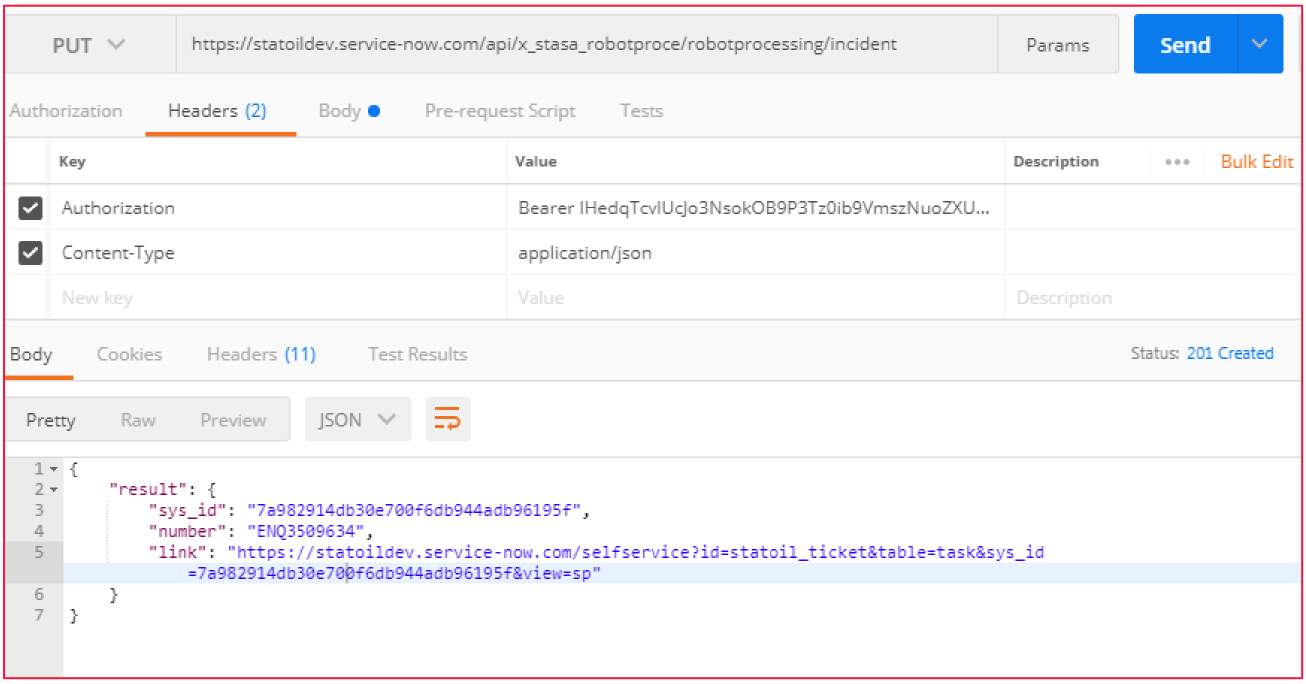
Status: 200 OK

```
{
    "access_token": "WSBae6fuFirl0-PjsyjtKw3F0ulW1MoGFaTSMCpLfW7oj2ojiBaP_mqkKjvaUcgSy2n1voRxCcIECPGPKaG3MQ",
    "refresh_token": "xh00La7EkgADwWB21zew3Ed-bbkkTIICnqbGE82X9U-C9owqnorRQX89q8tdHj1rj-XpEBApthtUUpC5ow2QIA",
    "scope": "useraccount",
    "token_type": "Bearer",
    "expires_in": 99
}
```

2.3 Use access token for authentication of API

Access the ServiceNow table API or REST API by using the access_token for authentication.

To authenticate, enter the header Authorization as Bearer followed by the access_token as shown below in the image below.



PUT https://statoildev.service-now.com/api/x_stasa_robotproce/robotprocessing/incident

	Key	Value	Description
☑	Authorization	Bearer IHedqTcvlUcJo3NsokOB9P3Tz0ib9VmszNuoZXU...	
☑	Content-Type	application/json	
	New key	Value	Description

Status: 201 Created

```
{
    "result": {
        "sys_id": "7a982914db30e700f6db944adb96195f",
        "number": "ENQ3509634",
        "link": "https://statoildev.service-now.com/selfservice?id=statoil_ticket&table=task&sys_id
            =7a982914db30e700f6db944adb96195f&view=sp"
    }
}
```

3. For Admins

The below section will explain how to create a OAuth registry for an Integration. Create the registry in dev instance first and then export the xml to TEST and PROD to maintain uniformity.

3.1 Create a new Application registry

In application navigator go to **System OAuth>Application Registry.**

Click on new button and select **Create an OAuth API endpoint for external clients.**

Fill the form and submit.

Name: Enter a valid name, preferably the name of the integration

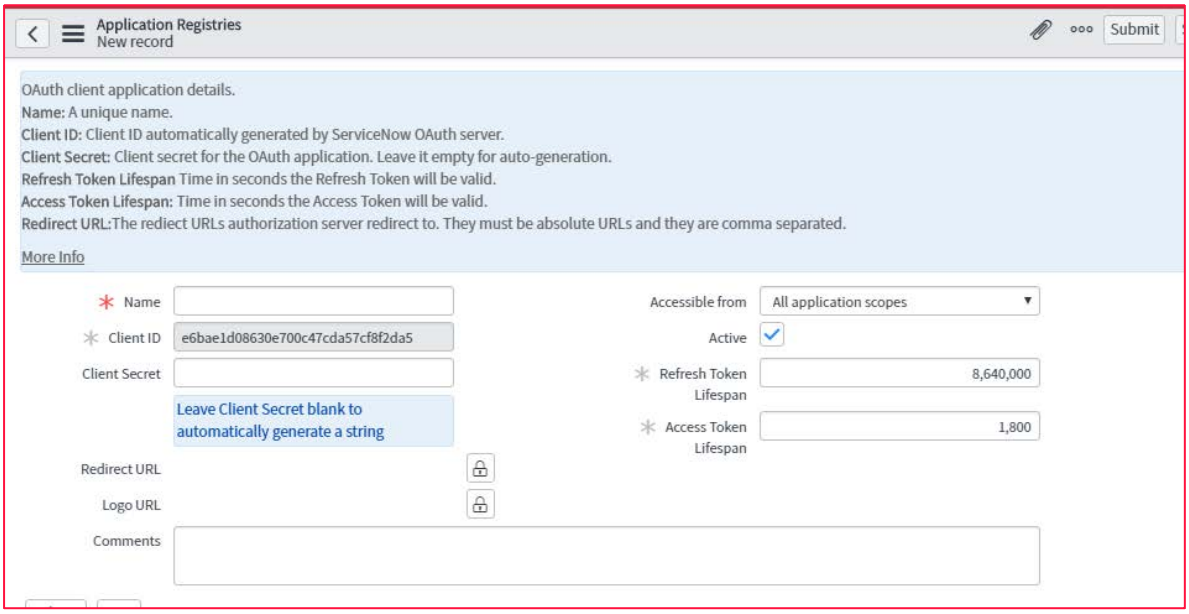
Client ID: Autogenerated by instance. To be shared with client

Client Secret: Enter a complex string having 20-bit in length. To be shared with client.

Comments: Enter the information about the integration and Point of contact of the integration.

Refresh Token Lifespan: Expiry time in seconds for refresh token. Set this value on discussion within the team and with the integration team. Default value is 8,640,000sec (default is 2400 hours)

Access Token Lifespan: Expiry time in seconds for refresh token. Set this value on discussion within the team and with the integration team. Default value is 1,800sec (30mins)



OAuth client application details.
Name: A unique name.
Client ID: Client ID automatically generated by ServiceNow OAuth server.
Client Secret: Client secret for the OAuth application. Leave it empty for auto-generation.
Refresh Token Lifespan Time in seconds the Refresh Token will be valid.
Access Token Lifespan: Time in seconds the Access Token will be valid.
Redirect URL: The rediect URLs authorization server redirect to. They must be absolute URLs and they are comma separated.
More Info

* Name		Accessible from	All application scopes ▾
* Client ID	e6bae1d08630e700c47cda57cf8f2da5	Active	☑
Client Secret		* Refresh Token Lifespan	8,640,000
	Leave Client Secret blank to automatically generate a string	* Access Token Lifespan	1,800
Redirect URL			
Logo URL			
Comments			

3.2 To be noted

Test the OAuth in a REST client to confirm that it works.

Share the **Client ID** and **Client Secret** in a secured email.

The configuration will be same on all instances, so export the xml from dev and import on other instances.

4. References

1. Click here to watch the video on ServiceNow OAuth setup and usage
2. Click here to go through the ServiceNow system documentation on OAuth 2.0