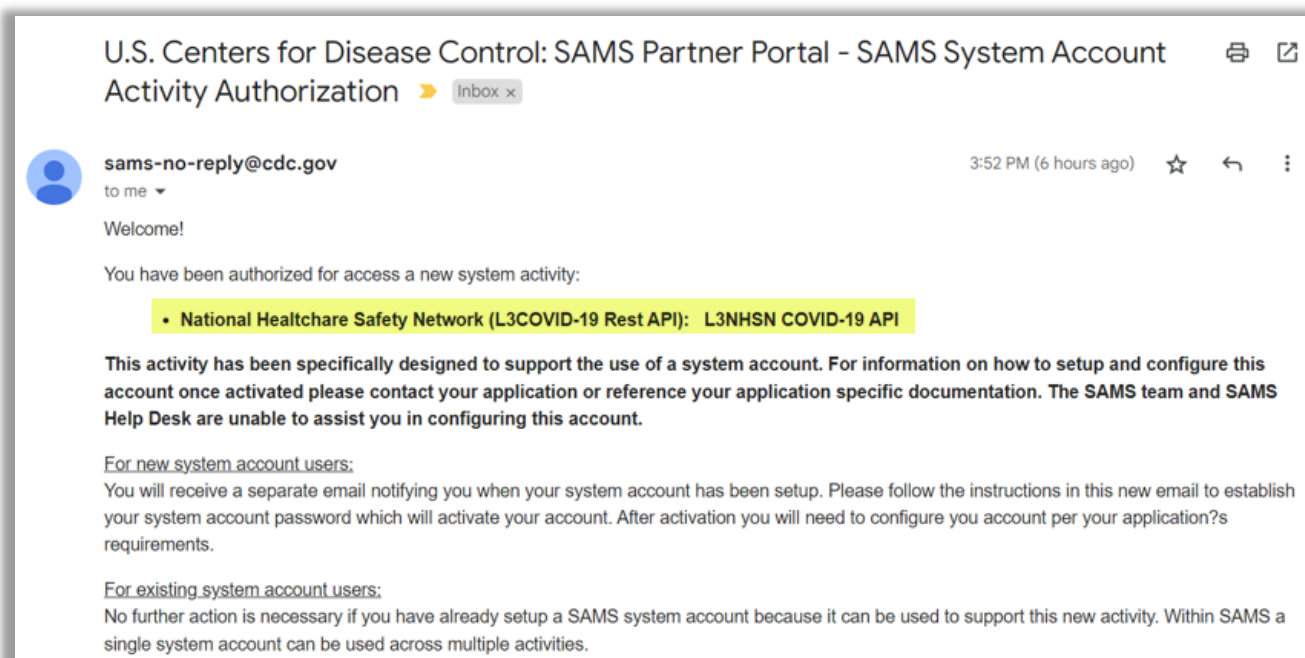


API Instructions: Submission of COVID-19 Hospital Data to NHSN

Note: The following instructions assume that the API sponsor completing the steps has requested a SAMS invitation and has the NHSN API activities added to their SAMS account. If you are the individual responsible for setting up the API and have not registered with SAMS and had API activities added to your account, reach out to NHSN@cdc.gov using the subject line **COVID-19 Hospital API**.

SAMS SYSTEM ACCOUNT ACTIVITY AUTHORIZATION

1. When API activities are added to your SAMS account, you will receive the below email noting that you have access to a new system activity: L3NHSN COVID-19 API.



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2. Select the link to establish your system account password.

The following system account has been created to support a web services connection to the SAMS activity you were recently granted access to.

System Account Name: SYS-911280

Before you can use your system account you must establish a system account password from within the SAMS console. To set your password please click [here](#).

When prompted, please enter:

Your username ([\[redacted\]](#)) and the password you chose during registration. Then click the Login button. **After a successful login you will be able to establish a different password for just your System Account.**

If you've forgotten your password for username ([\[redacted\]](#)), you may reset it by following the 'Forgot Your Password' link on the SAMS log in page.


Also please note: In order to access the SAMS Portal, your browser **must** be configured to use TLS 1.2 encryption. If your computer is not configured for TLS, or if you are unsure, please contact your local IT System Administrator for assistance.

Thank You,
The SAMS Team

3. The link will direct you to the SAMS Portal – log in using your previously established credentials. If you do not have SAMS credentials, refer to the note on page 1 of this document.

External Partners

SAMS Credentials



SAMS Username

SAMS Password


Login

[Forgot Your Password?](#)

For External Partners who login with only a SAMS issued UserID and Password.

OR

SAMS Multi-factor Login

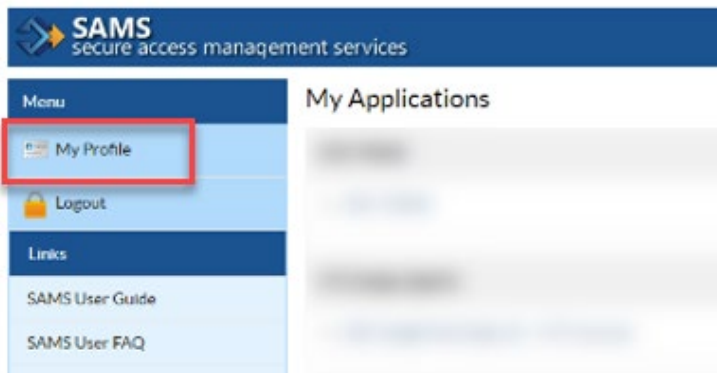


Sign on with a SAMS Grid Card or Mobile Soft Token

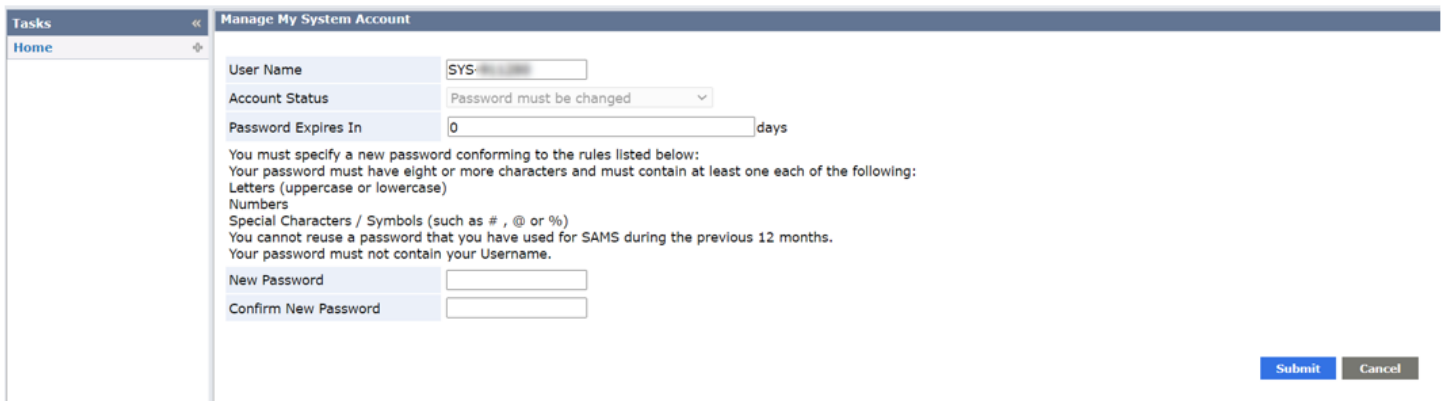
Login

For External Partners who have been issued a SAMS Multi-factor token(s).

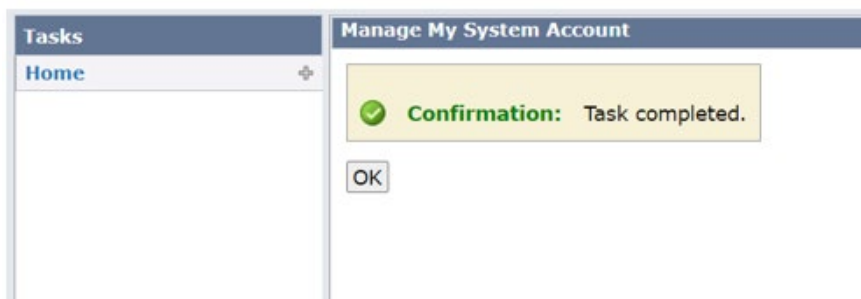
4. Select My Profile



5. In Tasks, set the System Account (API) Password. Ensure the Password Expires In field is greater than 0 days. Setting a new password will reset this to 365 days. Make note of your User Name (e.g. SYS-XXXXXX).



6. Confirmation that System Account Password has been set.



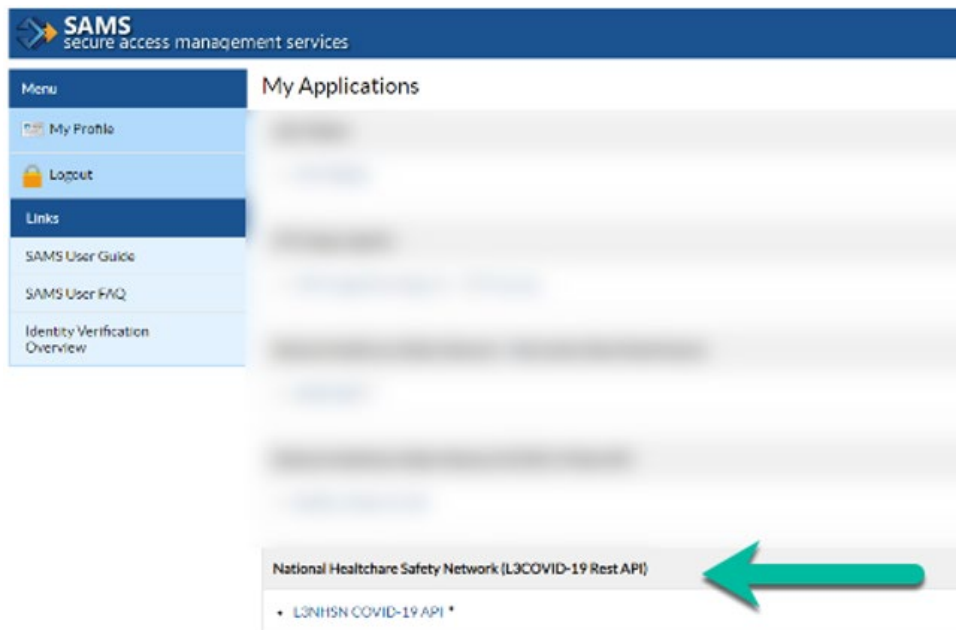
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API CSV UPLOAD ENDPOINT SETUP

Login to the SAMS Portal and ensure you have access to the National Healthcare Safety Network (L3COVID-19 Rest API) task.



Postman Setup - Upload CSV

1. Create a new **HTTP Post** request using the request URL:
<https://apigw.cdc.gov/DDID/NCEZID/l3nhsncovid19api/v1/messagerouter/upload/csv>
2. From the **Authorization** tab, create a new OAuth 2.0 Access Token entering the following values:
 - a. Token Name
 - i. Enter any name you want to identify the token (e.g., SAMS). The token name will be used later.
 - b. Grant Type (dropdown)
 - i. Select 'Password Credentials'
 - c. Access Token URL
 - i. <https://apigw.cdc.gov/auth/oauth/v2/token>
 - d. Client ID
 - i. Provided by System Admin
 - e. Client Password
 - i. Provided by System Admin
 - f. Username

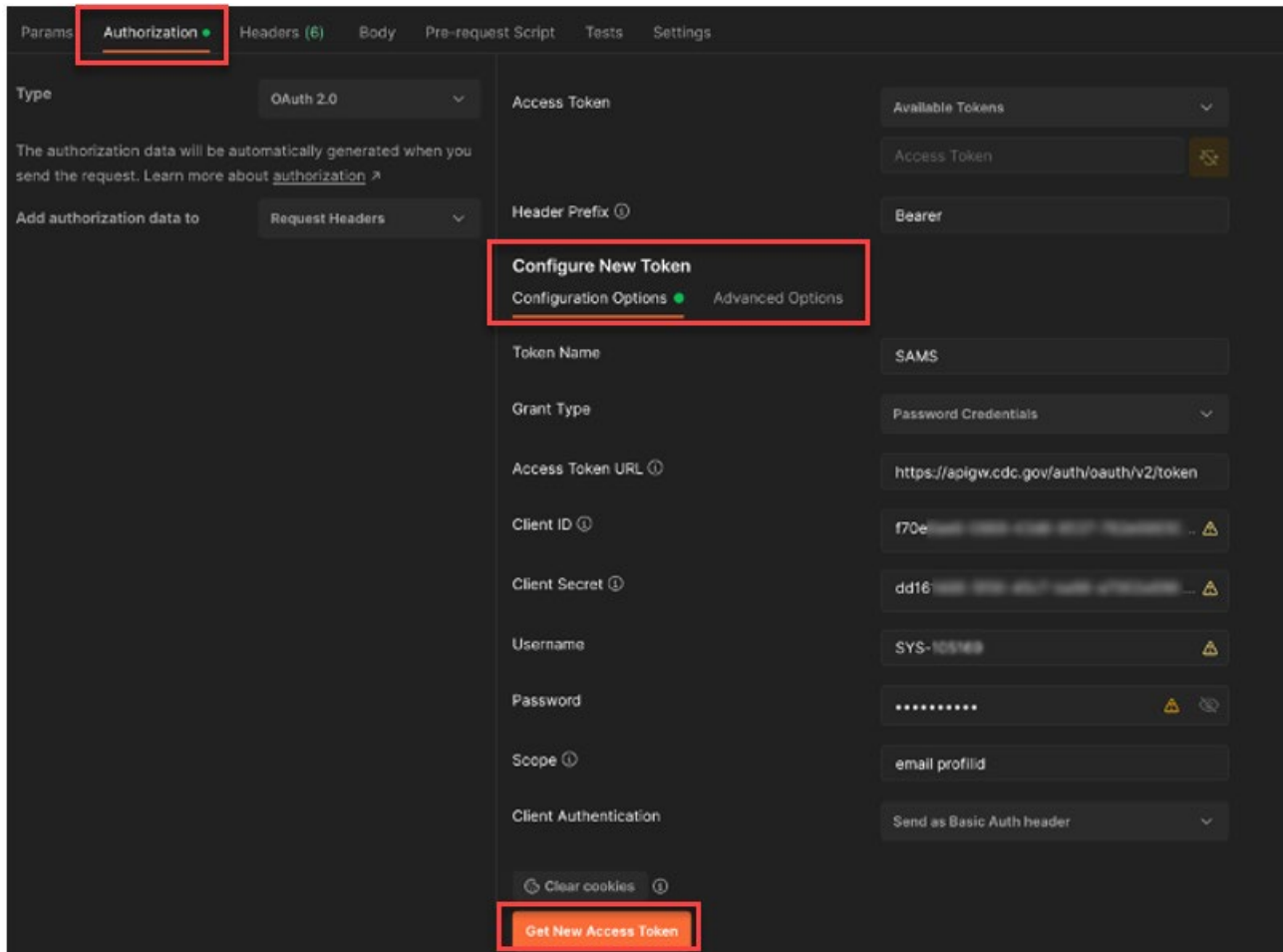
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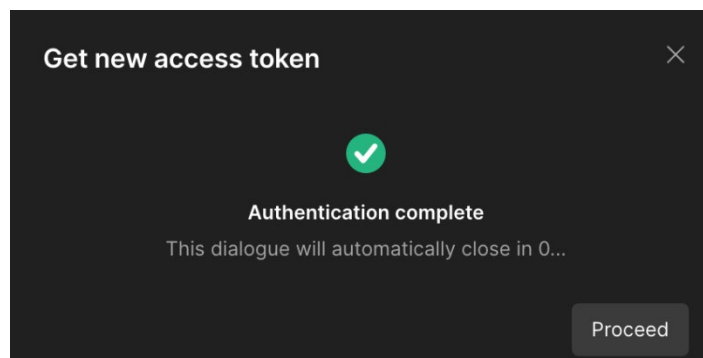
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- i. Refer to Step 5 - from the SAMS portal.
- g. Password
 - i. Refers to the System Account Password set in the SAMS portal
- h. Client Authentication (dropdown)
 - i. Select 'Send as Basic Auth header'

3. Select 'Get New Access Token' button.



The below prompt will appear if the request is successful.

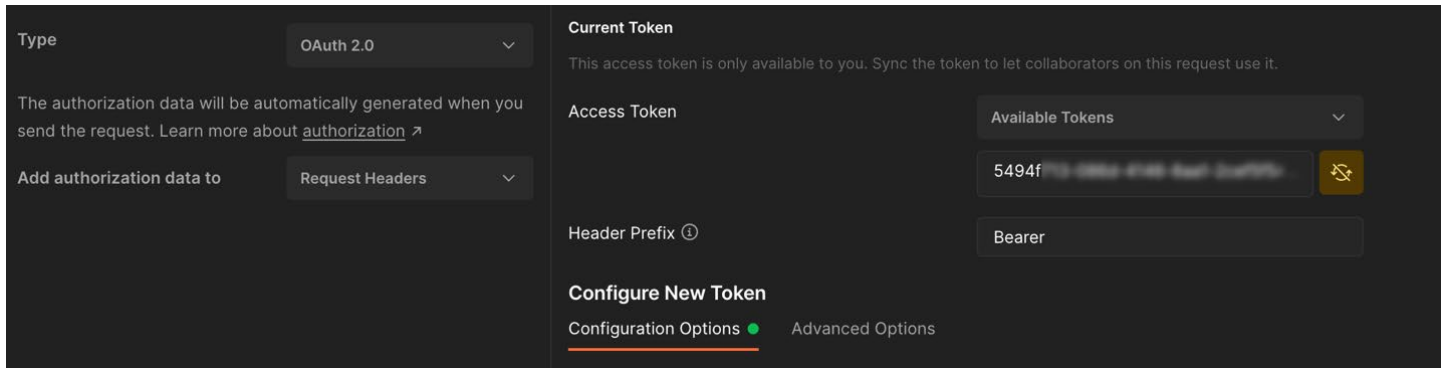


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4. Select the generated access token in the 'Access Token' dropdown at the top of the **Authorization** tab. The 'Token Name' chosen in step 2a. should appear in the dropdown.



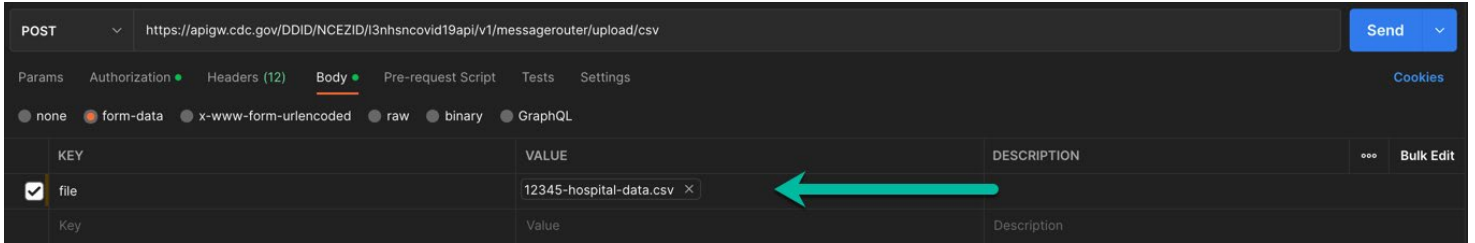
5. In the **Headers** tab, you should now see a Key named 'Authorization' with a value starting with 'Bearer'. Add another Key 'nhsnorgid' with the value of the NHSN Organization ID you would like to upload data for.

Note: For bulk submission of COVID-19 hospital data for a Group, the NHSN Organization ID refers to the Group ID.

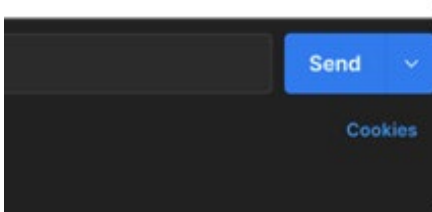
The screenshot shows the 'Headers' tab in Postman with 12 headers. Two red arrows point to the 'Authorization' and 'access_token' rows.

KEY	VALUE	DESCRIPTION
<input checked="" type="checkbox"/> Authorization	Bearer 1d34ff60-622b-467f-4588-67344024732a	Go to authorization
<input checked="" type="checkbox"/> Postman-Token	<calculated when request is sent>	
<input checked="" type="checkbox"/> Content-Type	multipart/form-data; boundary=<calculated when request is sent>	
<input checked="" type="checkbox"/> Content-Length	<calculated when request is sent>	
<input checked="" type="checkbox"/> Host	<calculated when request is sent>	
<input checked="" type="checkbox"/> User-Agent	PostmanRuntime/7.29.2	
<input checked="" type="checkbox"/> Accept	*/*	
<input checked="" type="checkbox"/> Accept-Encoding	gzip, deflate, br	
<input checked="" type="checkbox"/> Connection	keep-alive	
<input checked="" type="checkbox"/> access_token	1d34ff60-622b-467f-4588-67344024732a	
<input checked="" type="checkbox"/> nhsnorgid	30983	

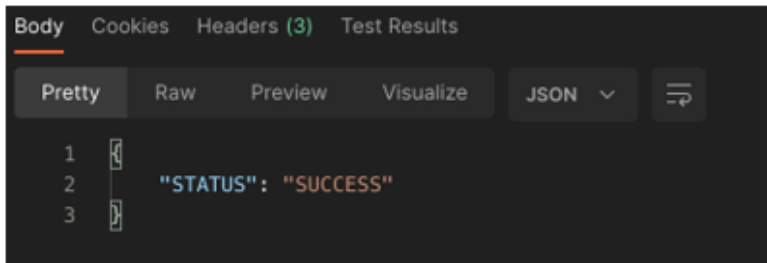
- In the **Body** tab, select the 'form-data' radio button. Under Key, select 'file'. Under Value click the 'Select Files' button to choose a file to upload.



- Select the Send button.



- In the response window, you should receive the message: {"STATUS": "SUCCESS"}



Possible Errors

- {"Error": "oAuth Token Validation Failed", "Reason": "Failed OAuth 2.0"}
 - This typically means your token has expired. Try generating another token and trying again. Be sure to select the newest token.
- "detail": "'nhsnorgid' header is required."
 - A file cannot be uploaded without the 'nhsnorgid' header. This tells us which Organization/Facility you wish to upload this data for.
- "detail": "Could not upload file. file extension must be '.csv'."
 - The API only accepts file with the '.csv' extension.
- "detail": "Could not get email address for facility XXXXX."
 - The email associated with your account doesn't have rights to create new hospital covid-19 data for the given NHSN Organization ID.
- Not Found
 - SAMS was unable to find the endpoint. Double check that your URL is correct.

API CSV Upload Curl Commands:

Use Curl to get Access Token:

```
curl -u "<NHSN client id goes here>:<NHSN secret goes here>" -X POST  
--header "Content-Type: application/x-www-form-urlencoded"  
-d "grant_type=password&username=<your SAMS system username>&password=<your SAMS system  
password>&scope=email profileid"  
https://apigw.cdc.gov/auth/oauth/v2/token
```

Use Curl to Upload CSV file:

```
curl --location --request POST  
'https://apigw.cdc.gov/DDID/NCEZID/I3nhsncovid19api/v1/messagerouter/upload/csv'  
--header 'authorization: Bearer <Bearer token here from step #1 here>'  
--header 'access_token: <Bearer token here from step #1 here>'  
--header 'nhsnorgid: <your orgid here>'  
--form 'file=@"test.csv"'
```

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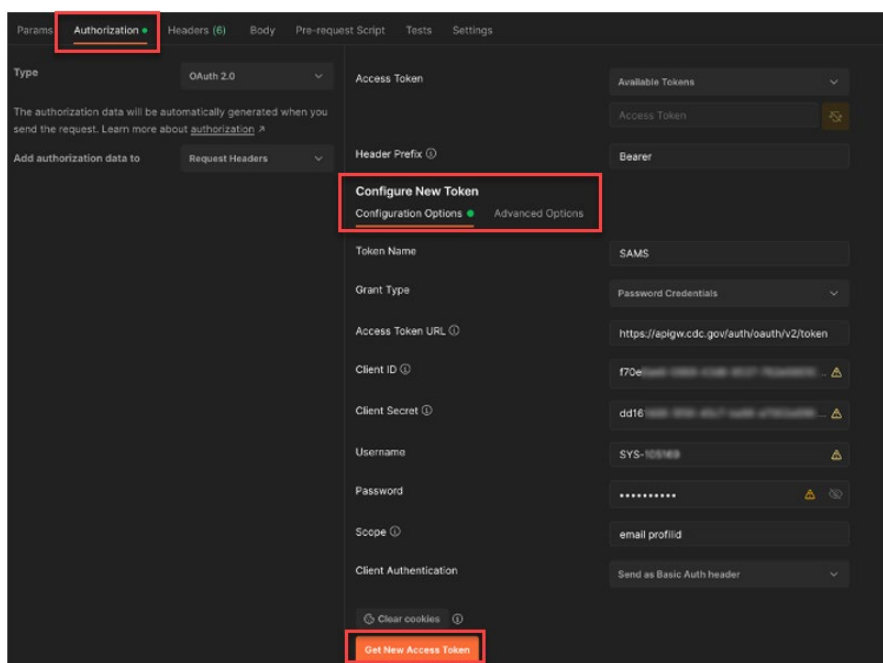


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API CSV DOWNLOAD ENDPOINT SETUP

Postman Setup - Download CSV

1. Create a new **HTTP Post** request using the request URL:
<https://apigw.cdc.gov/DDID/NCEZID/I3nhsncovid19api/v1/messagerouter/download/csv>
2. From the **Authorization** tab, create a new OAuth 2.0 Access Token entering the following values:
 - a. Token Name
 - i. Enter any name you want to identify the token (e.g., SAMS). The token name will be used later.
 - b. Grant Type (dropdown)
 - i. Select 'Password Credentials'
 - c. Access Token URL
 - i. <https://apigw.cdc.gov/auth/oauth/v2/token>
 - d. Client ID
 - i. Provided by System Admin
 - e. Client Password
 - i. Provided by System Admin
 - f. Username
 - i. Refer to Step 5 - from the SAMS portal.
 - g. Password
 - i. Refers to the System Account Password set in the SAMS portal
 - h. Client Authentication (dropdown)
 - i. Select 'Send as Basic Auth header'
3. Select 'Get New Access Token' button.

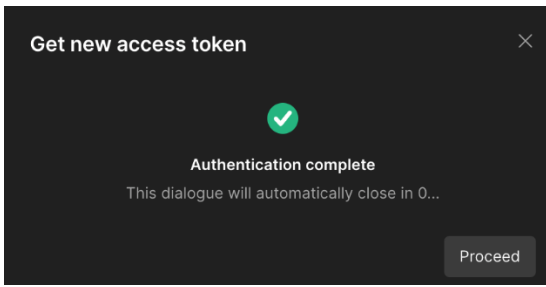


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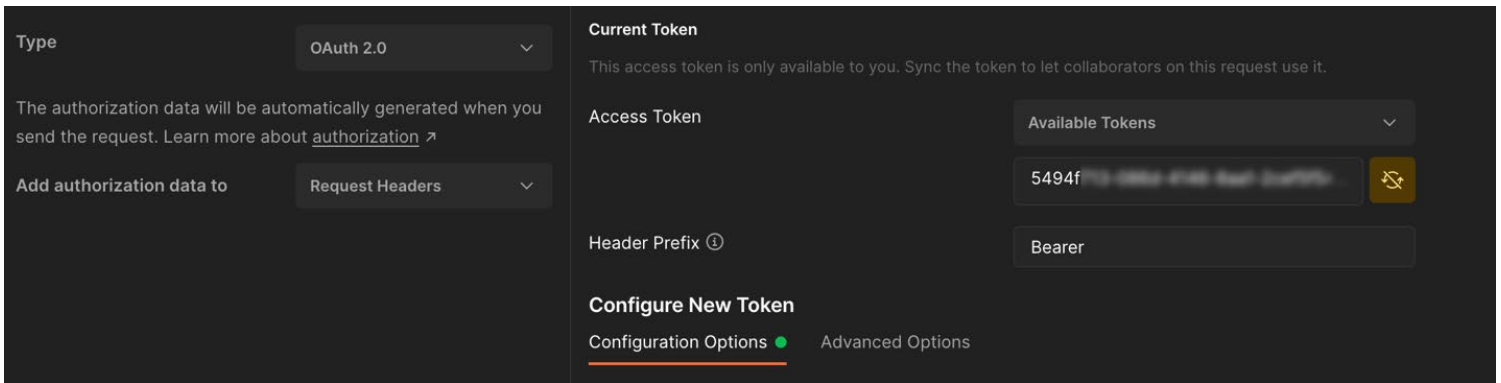


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The below prompt will appear if the request is successful.

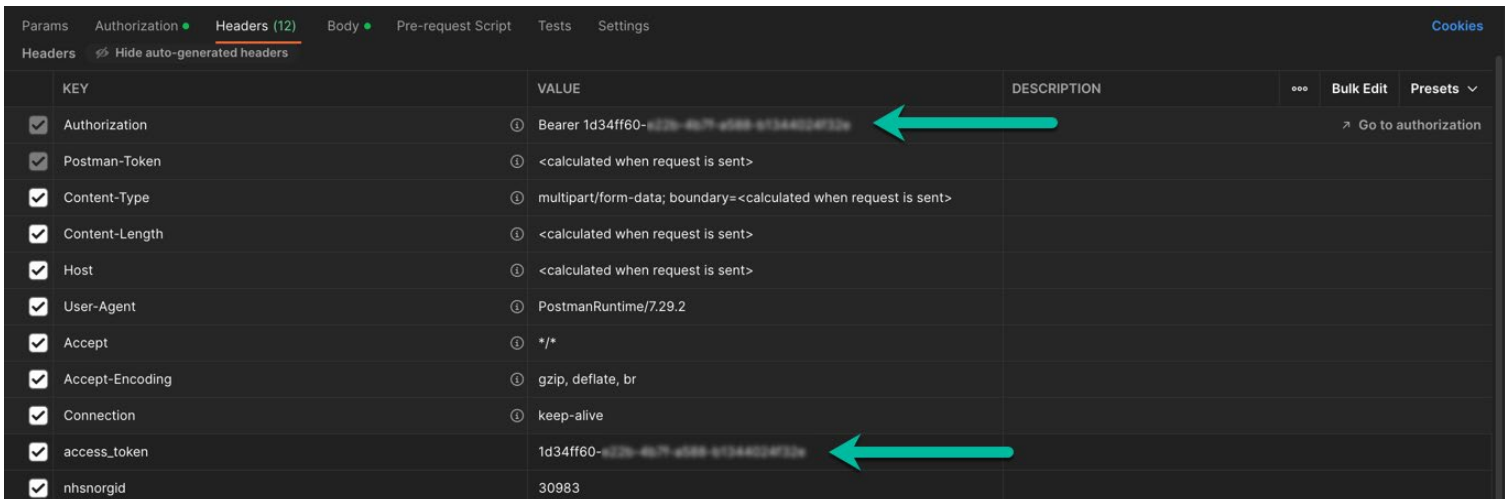


4. Select the generated access token in the 'Access Token' dropdown at the top of the **Authorization** tab. The 'Token Name' chosen in step 2a. should appear in the dropdown.

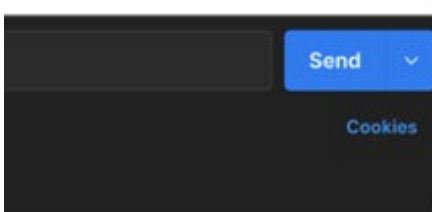


5. In the **Headers** tab, you should now see a Key named 'Authorization' with a value starting with 'Bearer'. Add another Key 'nhsnorgid' with the value of the NHSN Organization ID you would like to upload data for.

Note: For bulk submission of COVID-19 hospital data for a Group, the NHSN Organization ID refers to the Group ID.



6. Select the Send button.



7. In the response window, you should see the data. You can save the response as a file by clicking 'Save Response' and selecting 'Save to a file'.

Possible Errors

- {"Error":"oAuth Token Validation Failed", "Reason":"Failed OAuth 2.0"}
 - This typically means your token has expired. Try generating another token and trying again. Be sure to select the newest token.
- "detail": "'nhsnorgid' header is required."
 - A file cannot be uploaded without the 'nhsnorgid' header. This tells us which Organization/Facility you wish to upload this data for.
- "detail": "Could not get email address for facility XXXXX."
 - The email associated with your account doesn't have rights to create new hospital covid-19 data for the given NHSN Organization ID.
- Not Found
 - SAMS was unable to find the endpoint. Double check that your URL is correct.

API CSV Download Curl Commands:

Use Curl to get Access Token:

```
curl -u "<NHSN client id goes here>:<NHSN secret goes here>" -X POST
```

```
--header "Content-Type: application/x-www-form-urlencoded"
```

```
-d "grant_type=password&username=<your SAMS system username>&password=<your SAMS system password>&scope=email profileid"
```

<https://apigw.cdc.gov/auth/oauth/v2/token>

Use Curl to Download CSV file:

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```
curl --location --request POST
'https://apigw.cdc.gov/DDID/NCEZID/l3nhsncovid19api/v1/messagerouter/download/csv'
--header 'authorization: Bearer <Bearer token here from step #1 here>'
--header 'access_token: <Bearer token here from step #1 here>'
--header 'nhsnorgid: <your orgid here>'
--header 'Content-Type: application/json'
```

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