User Guide To Java Sample Code

CERTIFICATE AUTHENTICATION : JAVA

About

- This Sample Code is targeted for those who are new in calling API using Certificate Authentication with PKCS12 File in Java Language

- This Sample Code provides the minimum requirement in calling an "GET" Request API using HttpURLConnection class

Prerequisites

- Java 8 (Minimum)* – [Download Link](#)

- Developer Account with Certificate Authentication App**

- Certificate Generated from OpenSSL Command*

- PKCS12 (.p12 Extension) file of the Certificate + Private Key

*Java 8 Installation Guide: https://docs.oracle.com/javase/8/docs/technotes/guides/install/windows_jdk_install.html#CHDEBCCJ

**Ensure the Application is subscribed to the desire API

*Note that the generated certificate should be in .pem file format.
For more information, refer to https://support.symantec.com/en_US/article.TECH242030.html.

For creation of account, you may view the Started Guides here

SETTING UP AND CHECKS

- Download the Sample Code [here](#) and stored it at your desire location

- Check Java program is using Java 8 or higher
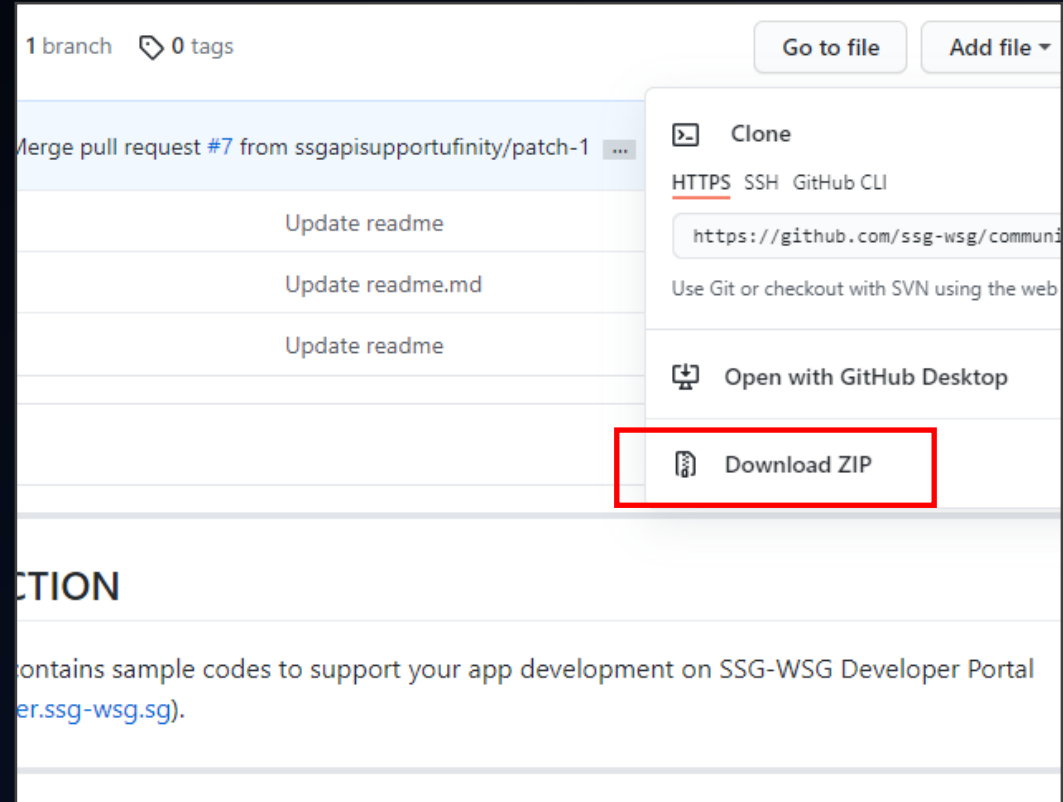
GENERATING PKCS12 FILE

This Sample Code requires a PKCS12 File to successfully call an API.

1. Ensure you have generated certificate and key pem file

2. Navigate to the folder containing both files and enter the following command using Openssl (or gitbash)

   - openssl pkcs12 -export -inkey "key file" –in "certificate file" -out "name.p12" -passout pass:"Export password"

Export password is used to unlock the pkcs12 file

The file will be generated in the same folder upon completion

CODE ADJUSTMENT

- Open the Sample Code using any Editor and make the following changes:

  - File Path Parameter – The path location address to the PKCS12 File

  - Password Parameter – To unlock the PKCS12 File

- Save the changes and close the Editor

RUNNING THE CODE

- Open CMD and navigate to the sample code file
  - cd "Path to Sample Code"

- Compile and Run the Java File with the following commands
  - javac *filename*.java
  - java *filename*

RUNNING THE CODE

Enter URL to call the API

URL Examples:

- https://api.ssg-wsg.sg/courses/categories?keyword=Training

- https://api.ssg-wsg.sg/courses/directory/SCN-198202248E-01-CRS-N-0027685

- https://api.ssg-wsg.sg/courses/tags?sortBy=0

```
C:\Users\User\SampleCode\SampleCodeCertJava>java SSGWSGSampleCodeCertJava
#################################################################
Simple Program in Java to Get API with Certificate
#################################################################
1) Please get ready the GET API URL
Enter URL to continue: https://api.ssg-wsg.sg/courses/categories?keyword=Training
```

Results

SUCCESSFUL CALL

UNSUCCESSFUL CALL

```
{
  "data": {
    "categories": [
      {
        "display": true,
        "id": 1,
        "name": "Area of Training",
        "rolodex": {
          "display": false,
          "numberOfLetters": 1
        }
      },
      {
        "display": true,
        "id": 4,
        "name": "Training Partners",
        "rolodex": {
          "display": true,
          "numberOfLetters": 3
        }
      }
    ]
  },
  "error": {},
  "meta": {
    "total": 2
  },
  "status": 200
}
```

```
1) Please get ready the GET API URL
Enter URL to continue: https://public-api.ssg-wsg.sg/courses/categories

Key: null  Value: [HTTP/1.1 401 Unauthorized]
Key: Content-Length  Value: [46]
Key: X-Generator  Value: [tyk.io]
Key: Date  Value: [Mon, 24 May 2021 01:36:34 GMT]
Key: Content-Type  Value: [application/json]

Error Message: java.io.IOException: Server returned HTTP response code: 401 for URL: https://public-api.ssg-wsg.sg/courses/categories
Please check if you have subscribed to the API or enter the correct Input Value
```

Upon keying incorrect data for URL an error message will be shown to user