Member FAQ's on "Extranet API"

Version 5.0

April 2023

Background

Exchange currently provides Extranet facility to members to access common and member specific reports from Member Portal-Extranet Download Option (https://ims.connect2nsccl.com/MemberPortal/) and Extranet API via Internet (https://www.connect2nse.com/extranet-api/) & Lease Line (https://172.19.125.70:443/extranet-api/).

Important Note: Members may please note that access to Extranet for internet users via Internet FTP (ftp://ftp.connect2nse.com) and usage of Guest login credentials (for lease line and internet ftp) are discontinued.

Frequently Asked Questions (FAQs)

NON-TECHNICAL QUERY:

1. What is the process of Registering for Extranet API?
   In order to register for Extranet API kindly refer to the Extranet API - Member Registration Help file for UAT as attached in the below circular link.:
   https://archives.nseindia.com/content/circulars/MSD55065.zip

2. What is Secret Key?
   The secret key is auto generated by the system post successful registration and the user will receive the secret key along with the user id and password on the email id used during the registration process of Extranet API.

3. Where to use the Secret Key received during registration process?
   Secret Key is to be used to encrypt the password. The encrypted password should be send as part of the request while calling Login API

   Example of such email is as below
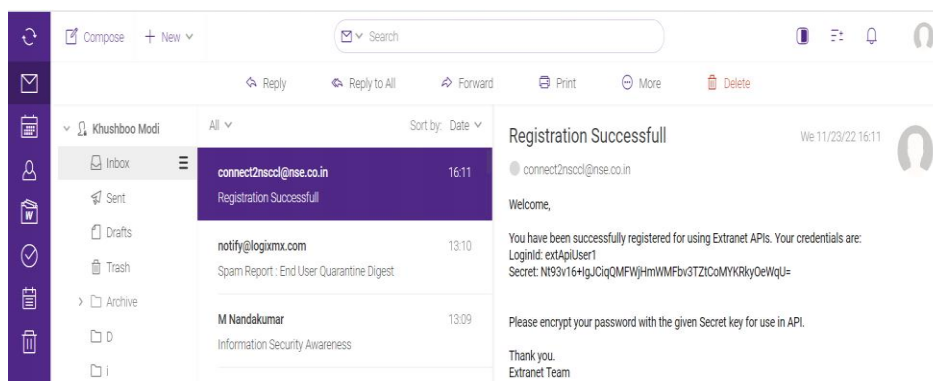
4. How can I get the password?
   Member would need to set the password to use the Extranet-API while registering through member portal. Password need to be encrypted with the secret key received on the registered email-id post successful registration.

5. How to change the password which is set during registration?
   Member may change the password using the Edit Profile menu in Member Portal. Member needs to enter the new Password and Confirm Password and clicking on Submit button on the Edit Profile page.

If password is reset then an email will go to the user intimating that the password has been reset.

Below is the screenshot of the Change Password screen and the email sent to the user post password being reset.
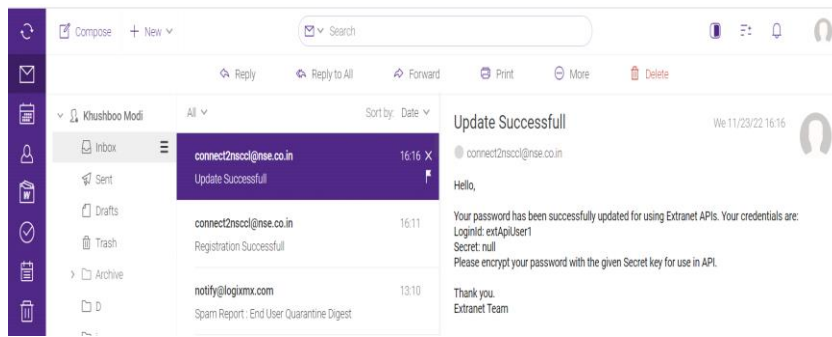
6. **What if I get "User is Disabled" error while trying to Login into the Member Portal for** registering?

In case of Sub user the member has to contact the Admin user and provide Login ID for the Admin to enable the sub user.

The Admin user will then login to the Member Portal with the member code, user id and password and follow below process:

Go to the menu 'User Management' and click on sub-menu 'Modify User'. On clicking the sub-menu a screen would open displaying a list of all the users created by the Admin user as below:

In case of a user being disabled the value in the column User Status would appear as Enable and admin user will have to click 'Enable' in order to enable the particular user.

In case of Admin user being disabled, members are requested to send a mail to msm@nse.co.in along with the details of admin user id which they need to reset.

7. What if the user does not receive the mail after successful registration?
Member/Vendor need to check if the email id provided by them in the registration screen is correct or not.
In case the email id provided during registration is correct and yet the member/vendor has not received the mail, then they need to contact the Help desk team at msm@nse.co.in.

8. What are the necessary details to be provided by members/vendors while reporting an UAT issue for quick resolution?
   • Member /Vendor code & Name

   • Login user credential

   • The application member/vendor is using to execute the APIs

   • The request and response body of the API executed

   • Date and time of observation

   • Details of error /observation

   • Screenshots of error/observation

   • Export of the request for the error/observation

9. Members should send requests to the Extranet API during which period for UAT and LIVE?
For Live: Members should send requests to the API between 6 AM to 5 AM next day.
For UAT: Members should send requests to the API between 9 AM to 6 PM same day.
Note: - Extranet API services shall not be available between 5 AM to 6 AM due to maintenance activity.

10. What are the exceptions when the extranet is not available?
The below are the exception scenarios when extranet won't be available over the weekend. Else there is no down time on weekend:

- Monthly Mock/DR45 activity
- Planned Release if any
- Server patching

All planned downtimes will be communicated to members via relevant circulars from time to time.

11. What is the time zone followed for downloading the files on extranet?
The system follows UTC (Universal Time Coordinated) format for downloading the files on extranet.

12. Is there any role-based access provided to users for accessing common and member specific files?
The admin user of the member can provide controlled access to its sub users for specific segments / services (Segments -CM, CD, FO, DEBT, CO, SLB and Services- Extranet-Common). The procedure for the same is provided in circular number MSD55542 dated February 08, 2023.

13. Are the files available in UAT and LIVE same?
No. of files available in UAT and Live may vary from time to time.

Currently the below are the sample files Member specific and common files which are being made available for date 13-Jan-2023 on UAT Extranet server to facilitate testing:

Seg ment	File Descri ption	Type	File Nomenclature	Member Extranet Path	New Files
CD	Final Trade Log File	Mem ber Speci fic	FINAL_X_DDMMYYYY_ TMCODE.txt.gz	/cdsftp/X<Memb er Code>folder	/cdsftp/X<MEMCD>/Onlinebackup/FINAL_X_ 13012023_<MEMCD>.txt.gz
CM	Final Trade Report	Mem ber Speci fic	DDMMYYYY_TMCODE.t xt.gz	/<Member Code>folder	/<MEMCD>/Onlinebackup/13012023_<MEM CD>.txt.gz
CO	Final Trade Log File	Mem ber Speci fic	O_DDMMYYYY_TMCOD E.txt.gz	/comtftp/O<Mem ber Code>folder	/comtftp/O<MEMCD>/Onlinebackup/O_1301 2023_<MEMCD>.txt.gz
FO	Trade log	Mem ber Speci fic	DDMMYYYY_TMCODE.t xt.gz	/faoftp/F<Memb er Code>folder	/faoftp/F<MEMCD>/Onlinebackup/13012023 _<MEMCD>.txt.gz
CD	Contra ct Files	Com mon	cd_contract.gz	/cdsftp/cdscom mon	Latest Files kept
CM	Securit y File	Com mon	security.gz	/common/NTNE AT	Latest Files kept
CO	Contra ct and Spd Contra ct Files	Com mon	co_contract.gz	/comtftp/comtco mmon	Latest Files kept
FO	Contra ct file	Com mon	contract.gz	/faoftp/faocomm on	Latest Files kept

SLB	Contract File	Common	security_slb.gz	/slbftp/slbcommon/NTNEAT	Latest Files kept
SLB	Participant File	Common	participant_slb.gz	/slbftp/slbcommon/NTNEAT	Latest Files kept

Note : These are sample files format may or may not match with the file format which are applicable in Live and hence members are requested not to match the file format.

In case members wish to check the file format, a parallel live access for API is available where the same can be checked. Circular link for the parallel live is provided below – https://archives.nseindia.com/content/circulars/MSD55065.zip

14. At a time how many parallel login are allowed for a single Extranet API?
Only one concurrent user is allowed to login for a single API user i.e the latest token will only be considered valid.

TECHNICAL QUERY:

15. What is the password encryption algorithm used? /What is the Algorithm for password encryption? What is the mode for encryption? / What is the key size?
Algorithm: AES-256-ECB.
Key Size: 256Bit
Mode: ECB.

16. While placing an API request for Extranet what if the user is not getting any response?
Check if the input parameter provided in the request is as per the format/order provided in the API document for that specific request. Please refer the Extranet API or help document for more details.

17. While placing the Login API request, user gets error code as 701 i.e. Invalid Member Code, Login ID or Password.
Check if you as a member are registered on the Member Portal.

Check if the parameters passed (Member code, Login id and password) are correct. Ensure that the password being entered is not the secret key but the encrypted password using the secret key.

18. While placing the Login API request, user gets error code as 605.
Check if the user has entered the secret key in the password parameter instead of the password. The password is to be encrypted with AES256 encryption using the secret key received during API registration.

The process for password encryption is mentioned in the Extranet Registration Help document towards the end of the document i.e. point no 8 and 9.

e.g.
Request   Object:
{"memberCode":"11086","password":"NTk1oUwNKdxGfNhAIKsbhjIqDXG/pFyPl2fcwr7uBgE="
,"loginId":"ltmapi"}

Response Object :
{
*   "token": null,*

"memberCode": "11086",
"loginId": "Itmapi",
"code": [
"605"
],
"status": "error",
"timestamp": "2022-12-07T11:33:48.602+00:00"
}

19. What if I get error code 803 error while calling an API?
Response code "803" clearly specifies invalid token/ token expired. The user has to regenerate the token and try again as the token is valid for 1 hour only.
User can always generate a new token any number of times he wants by executing the Login API.

Error code 803 (Invalid token) also occurs if the user regenerates a new token but uses previous/old token instead.

If user is using Postman client, please refer the below steps on using the token.
Authorization Tab ->Select Bearer Token -> Paste the token in token tab.

20. How to encrypt the raw password with the key received/generated after successful registration?
To encrypt the password use the code mentioned in the help document. Code is available in JAVA and .net.

21. What if I am getting error code 702 in response?
Error code 702 clearly specifies that USER IS DISABLED. It usually occurs after 5 unsuccessful login attempts.

Members need to follow the steps provided in question number 5 to reset the password through Extranet API registration module on member portal.

Vendors need to send the request to enable the user to the mail id: msm@nse.co.in with the details provided in Question no 8.

22. What is the expiry time of the login token?
Token expiration is currently set to 1 hour.

23. What if my data in response is empty even after successful execution of the API and getting response code 601 i.e., successful response?
If the response code is 601 and the still the response data is empty usually means that there is basically no file present at that folder path and the folder is empty.

24. Member faces error code 712 while executing Login API.
Response code 712 clearly specifies 'Folder not found'. User needs to check the base folder i.e., instead of "/common" provide "/" only and look for the folders available to navigate in the response received.
Example:

```
Body   Cookies (1)   Headers (22)   Test Results

Pretty   Raw   Preview   Visualize   JSON  ∨   ⇥

1    {
2        "reponseCode": [
3            "601"
4        ],
5        "responseDesc": "success",
6        "timestamp": "2022-12-08T10:34:48.917848500Z",
7        "version": "1.0",
8        "data": [
9            {
10               "name": "APPSEC_COLLVAL_18032020.csv",
11               "type": "File",
12               "folderPath": "",
13               "lastUpdated": "2020-03-18T06:30:33.739+00:00"
14           },
15           {
16               "name": "baseprice",
17               "type": "Folder",                    ←
18               "folderPath": "",
19               "lastUpdated": "2020-11-20T09:58:25.656+00:00"
20           },
21           {
22               "name": "bhavcopy",
23               "type": "Folder",
```

25. What if I am getting response code 920?
Response code 920 specifies 'Invalid version number of the API'. Example using 1 instead of 1.0 etc Kindly check the version number in the URL. Refer the help document on how to provide the version.

26. Receiving response code 703 in log out API.
Response code 703 specifies 'Invalid member Code' or login ID. It corresponds only to log out API. Check if the member code and log in ID provided is correct and you are passing them correctly in the body.

27. What if I am receiving response code 704.
Response code 704 specifies 'Member is not eligible for a particular segment'. It usually means that the Member's Folder is not present or a particular segment folder is not available for the Member. Please reach out to the help desk team to if your folder in unavailable and make sure you are accessing the correct segment.

28. Receiving Response code 706.
Response code 706 usually means that the user is providing Invalid parameters/Body consisting Segment, Member code, date, filename and folder Path etc. It's basically Invalid body been provided for the execution of the API.Refer the help document and API specification document on how to provide correct body to execute the API.

29. Are the parameters to be provided in the API case sensitive?
Yes the parameters to be provided in the API are case sensitive. Providing non case sensitive parameter name would usually return response codes 710, 711, 712, 714 and 714. Member should ensure the Parameters provided are correct. Kindly refer the help document and API specification document on how to provide correct parameter

30. Receiving response code 921.
If the user receives response code 921, which means 'Invalid syntax' which means member has provided a syntactical error while executing the API as it corresponds to Invalid syntax. Syntactical error usually occurs in the API URL and its Parameters.

31. Receiving Response code 923.
It is a child code to 921. which means Invalid URL. Please make sure there is now syntactical error and the URL is correct.

32. Receiving Response code 925.
Response code 925 generally states that the Authentication server is not working properly or is down. The user will not be able to log in/ log out during this period. User can try execution after some time or reach out to the help desk team.

33. How to provide the token in the API?
The token needs to be provided as a header in the API named **"Authorization: Bearer +Token".**

34. How are the API endpoints to be used?
The API end points are to be executed in applications like Postman etc. and are not web addresses.
The members are not to use these end points as web address and execute them on websites like Google Chrome, Firefox, or Safari. These are API end points and not any website.

35. While executing download API member is getting status code as 401.
Status code 401 means Unauthorized Token. Member has to provide "/" (front slash) instead of "\" (back slash) in the folder path parameter.

36. What is the password encryption code for Python?
Kindly find below the password encryption code in Python.

```python
import base64
from cryptography.hazmat.primitives.ciphers import Cipher, algorithms, modes
from cryptography.hazmat.primitives import padding
from cryptography.hazmat.backends import default_backend
from django.utils.encoding import force_bytes, force_str


SECRET_KEY = "w0IWvhdIdP5BOQohbJqp9pNHUMiIU+Cc/4gSs06mRIU="
value = force_bytes("abcd@1234")

backend = default_backend()

key= force_bytes(base64.urlsafe_b64decode(SECRET_KEY))
print(key)

class Crypto:

    def __init__(self):
        self.encryptor = Cipher(algorithms.AES(key), modes.ECB(), backend).encryptor()
        self.decryptor = Cipher(algorithms.AES(key), modes.ECB(), backend).decryptor()

    def encrypt(self):
        padder = padding.PKCS7(algorithms.AES(key).block_size).padder()
        padded_data = padder.update(value) + padder.finalize()
        encrypted_text = self.encryptor.update(padded_data) + self.encryptor.finalize()
        return encrypted_text

    def decrypt(self, value):
        padder = padding.PKCS7(algorithms.AES(key).block_size).unpadder()
        decrypted_data = self.decryptor.update(value)
```

```python
        unpadded = padder.update(decrypted_data) + padder.finalize()
        return unpadded

if __name__ == '__main__':
    print ('>>>>>>>>>>>')
    crypto = Crypto()
    text = force_str(base64.urlsafe_b64encode(crypto.encrypt()))
    print(text)
    print('<<<<<<<<<<<<<')
    text = force_str(crypto.decrypt(base64.urlsafe_b64decode(text)))
    print(text)
    text = force_str(crypto.decrypt(base64.urlsafe_b64decode("LvRHkSW+8OIMyk51T87KDQ==")))
    print(text)
```

37. What is the password encryption code in Java with imports?

```java
import java.io.UnsupportedEncodingException;
import java.security.InvalidKeyException;
import java.security.NoSuchAlgorithmException;
// Commons-codes library jar version 1.7
import org.apache.commons.codec.binary.Base64;

import javax.crypto.BadPaddingException;
import javax.crypto.Cipher;
import javax.crypto.IllegalBlockSizeException;
import javax.crypto.NoSuchPaddingException;
import javax.crypto.spec.SecretKeySpec;

public class App {
    public static void main(String[] args) throws UnsupportedEncodingException,
NoSuchAlgorithmException, NoSuchPaddingException, InvalidKeyException,
IllegalBlockSizeException, BadPaddingException {
        // Plain Text Password
        String password = "Nsejan@123";

        // sample key is - "XBaNb0xmK2TNRIfcHA3F306Oi14HWAeYmtUd0qRheTc="
        String key = "XBaNb0xmK2TNRIfcHA3F306Oi14HWAeYmtUd0qRheTc=";
        // Key is converted to byte array
        byte[] keyByteArray = new Base64().decode(key.getBytes("UTF-8"));

        // SecretKeySpec is used to construct a SecretKey from a byte array
        SecretKeySpec secretkeySpec = new SecretKeySpec(keyByteArray, "AES");
        Cipher cipher = Cipher.getInstance("aes/ecb/pkcs5padding");
        cipher.init(Cipher.ENCRYPT_MODE, secretkeySpec);

        // pass plain text that is to be encrypt
        String encrypt = (new Base64()).encodeAsString(cipher.doFinal(password.getBytes()));

        // actual key in base64 format
        System.out.println("encrypted string:" + encrypt);
    }
}
```

38. While executing the Download API member is getting error code as 715.
    Member has to navigate through the folders available by providing only "/" in the listing APIs and provide that only in the download API. i.e. the folders/files which are available

39. On executing Download API member is getting error code as 710.
    The error code 710 means Date Invalid, thus member has to pass the date parameter in the format DD-MM-YYYY.

40. Incase if the environment is not available what message will the system respond to the user?
    The user will get the response message as "502 -Bad Gateway" whenever the environment is not available.

41. When will a user face error 504 and what needs to be done?
    The user would face error 504 when the request is not able to reach to the Gateway or the response took very long time to reach the user. In such case, the user is requested to try again after some time and if the issue is persistent, please reach out to msm@nse.co.in.

42. **Facing error code 500 "Internal Server Error"?**
    This error means the server has failed to give the required response to the user. For this user needs to re-check and confirm if the request is correct (Parameters/ Headers/Body), if the issue is persistent, please reach out to the concerned team.

43. User is getting Service unavailable error: 503 while fetching member specific reports and common content list.
    This error means the server has failed to give a response and the respective service (Login/ common/ member specific data) may be down. User is requested to report the issue to the team concerned immediately or e-mail to msm@nse.co.in.

44. How many times can we generate the token?
    There is no threshold limit for generating the token, but the latest token will only be considered valid.

45. While executing the Member API user is getting error code as 720?
    Response code 720 specifies that the user/sub-user has not been provided access to that particular segment. To resolve this issue please log-in to member portal from admin id and provide access of that segment to the particular sub-user.

46. While executing the Common API user is getting error code as 721?
    Response code 720 specifies that the user/sub-user has not been provided access to the common service. To resolve this issue please log-in to member portal from admin id and provide access of the common service to the particular sub-user.

47. When and why would a user receive a HTTP status code other than 200?
    The user would receive a HTTP status code 200 for any API only when the response code in the API response is 601 success.

48. What are the API End points with samples to view and download common and member specific files ?

Following are the API endpoints:

Sr.no	Method	API EndPoint	Remarks
1	POST	/login/{version}	To login: e.g. /login/1.0
2	POST	/logout/{version}	To logout: e.g. /logout/1.0
3	GET	/member/content/{version}? segment=& folderPath=	To get List of Folders and files: /member/content/1.0? segment=& folderPath=
4	GET	/common/content/{version}? segment=&folderPath=	To get common folder and file list : /common/content/1.0? segment=& folderPath=
5	GET	/member/file/download/{version}? segment=&folderPath=&date=&filename=	To Download File : e.g. /member/file/download/1.0? segment=&folderPath=&date=&filename=
6	GET	/common/file/download/{version}? segment=&folderPath=&date=&filename=	To Download common file : e.g. /common/file/download/1.0? segment=&folderPath=&date=&filename=

Segment wise sample illustration are provided below:

Seg	File Type	File Description	File Nomenclatu	Extranet API Folder	Path Used for VIEWING the File	Path Used for Downloading the specific File
CM	Common File	Secutiy File	security.gz	/ntneat	/common/content/1.0? segment=CM&folderPath=/ntneat	/common/content/1.0? segment=CM&folderPath=/ntneat&filename=security.gz
FO	Common File	Contract file	contract.gz	/	/common/content/1.0? segment=FO&folderPath=/	/common/content/1.0? segment=FO&folderPath=/&filename=contract.gz
CD	Common File	Contract Files	cd_contract.gz	/	/common/content/1.0? segment=CD&folderPath=/	/common/content/1.0? segment=CD&folderPath=/&filename=cd_contract.gz
CO	Common File	Contract Files	co_contract.gz	/	/common/content/1.0? segment=CO&folderPath=/	/common/content/1.0? segment=CO&folderPath=/&filename=co_contract.gz
SLB	Common File	Contract File	security_slb.gz	/NTNEAT	/common/content/1.0? segment=SLB&folderPath=/NTNEAT	/common/content/1.0? segment=SLB&folderPath=/NTNEAT&filename=security_slb.gz
SLB	Member Specific File	SLB Limit Report	SLBM_UL_TMCODE_DDMMYYYY1.csv.gz	/Reports/Order_Reports	/member/file/download/1.0?segment=SLB&folderPath=/Reports/Order_Reports	/member/file/download/1.0?segment=SLB&folderPath=/Reports/Order_Reports&filename=SLBM_UL_TMCODE_DDMMYYYY1.csv.gz
CM	Member Specific File	Final Trade Report	DDMMYYYY_TMCODE.txt.gz	/	/member/file/download/1.0?segment=CM&folderPath=/	/member/file/download/1.0?segment=CM&folderPath=/&filename=DDMMYYYY_TMCODE.txt.gz
FO	Member Specific File	Trade log	DDMMYYYY_TMCODE.txt.gz	/	/member/file/download/1.0?segment=FO&folderPath=/	/member/file/download/1.0?segment=FO&folderPath=/&filename=DDMMYYYY_TMCODE.txt.gz
CD	Member Specific File	Final Trade Log File	FINAL_X_DDMMYYYY_TMCODE.txt	/	/member/file/download/1.0?segment=CD&folderPath=/	/member/file/download/1.0?segment=CD&folderPath=/&filename=FINAL_X_DDMMYYYY_TMCODE.txt.gz
CO	Member Specific File	Final Trade Log File	O_DDMMYYYY_TMCODE.txt.gz	/	/member/file/download/1.0?segment=CO&folderPath=/	/member/file/download/1.0?segment=CO&folderPath=/&filename=O_DDMMYYYY_TMCODE.txt.gz

Note : Where 1.0 in the above illustration is the Extranet API verson number is provided, which may change from time to time

***********END***********