FAQs on NOTIS-Access

Version 3.0

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Background:

The NSEIL Online Trade Inquiry System (NOTIS) is a client application/service provided by the Exchange for its Members to receive data for their trade, trade modifications and give-up confirmation on a real time basis.

The Exchange trading system transfers online data to the NOTIS server on real time basis. The NOTIS client application deployed at member end (i.e. using Application Program Interface APIs or EXE based, depending on the segment) sends periodical request to pull the data from the NOTIS server into their application for further processing.

FAQs:

1. How to access the NOTIS API / EXE for various segments?
    Members can connect to NOTIS API/EXE via Internet or Leased Line.

2. Which segments can be accessed via NOTIS API and EXE?
    All segments can be accessed via APIs. Currently Exchange also provides NOTIS EXE application for accessing Commodity Derivatives segment and Securities Lending and Borrowing Market (SLBM), however same shall be discontinued shortly. The decommission date for NOTIS exe in Commodity Derivatives segment and Securities Lending and Borrowing Market (SLBM) shall be communicated via a circular.

3. How to access the NOTIS API via Internet?
    For accessing NOTIS via internet members need to provide their static IP to the Exchange for whitelisting. The IP shall be whitelisted upon request and member shall be able to access the necessary data from said static IP's after connecting to the URL's provided in the API specifications.

4. How many static IPs can be whitelisted for accessing NOTIS API?
    NOTIS API can hold ONLY 200 characters for whitelisting of IP's. Accordingly, considering an average number of characters in an IP may range from 11 to 15 digits (eg. the IP: 192.168.1.1 has 11 characters including decimals) 12 to 16 static IPs can be whitelisted respectively.

5. How can multiple IPs being used for the same segment be combined for whitelisting in NOTIS API?
    If the member has a specified list of IP's from same segment, these can be combined using the asterix symbol ie *.
    For example: 192.168.1.1, 192.168.1.2, 192.168.1.3 can be used as 192.168.1.*
    By doing this more IP's can be whitelisted, however limit of 200 characters shall continue to remain applicable.

6. Can the same static IP be used for all the segments for accessing NOTIS?
    Yes, the same static IP can be used for all the segments for accessing NOTIS.

7. Can the same static IP be used for two Trading member codes?

No. The static IP is mapped at Member level and hence the same static IP cannot be used for two different Trading members.

8. How to access NOTIS exe via Internet for SLBM and Commodity Derivatives segments?
   Members may access NOTIS for SLBM and Commodity Derivatives segments via Internet, through the Exchange C2N Application Utilities. The member can login with Corporate manager id, add the static IP details which shall be whitelisted and thereafter access the necessary data after logging in the NOTIS EXE.
   Note : NOTIS exe in SLBM and Commodity Derivatives shall be discontinued.

9. How to access NOTIS through lease-line connectivity at member end?
   For members using leased-line connectivity, the WAN IP details at member end need to be provided to the Exchange. The leased line IP shall be whitelisted, and relevant firewall accesses shall be granted post which member shall be able to access the NOTIS API / EXE. Member shall have to change connection parameter in the connection set-up to IP - 172.19.125.70 and port 443 instead of www.connect2nse.com for connecting to NOTIS API Live via Lease Line.
   Note: UAT access is not available via Lease Line connectivity

10. What is a protocol document?
    The Exchange protocol document serves as a development guide for trading members to communicate with the NOTIS server thereby enabling download of trade and action inquiries.

11. How to trouble shoot while using NOTIS?
    Member may refer to the 'member trouble shooting guide' for trouble shooting of common errors faced while placing Token/Trade Inquiry API requests.

12. Where to access the protocol documents and trouble- shooting guide for NOTIS API?
    The latest protocol documents for NOTIS API and trouble-shooting guide are made available on the Exchange website. The same can be accessed by visiting the below link:
    https://www.nseindia.com/trade/platform-services-neat-trading-system-protocols

13. What are the steps to access NOTIS API?
    NOTIS API can be accessed by following the below mentioned steps:
    a) Download the NOTIS API protocol documents and troubleshooting guide from the website as a ready reference for basic queries
    b) Develop customized front ends or interface with own (members') internal systems
    c) Complete the registration of API and creation of user credentials with the MSD team of the Exchange
    d) Access the UAT Trade Inquiry API Service and complete the testing
    e) Access the LIVE/Production Trade Inquiry API Service.

14. How to complete registration of API and create the user account?
    The steps to complete the API registration and create user account are as follows:

a) Send the registration request to the MSD team on the email ID: msm@nse.co.in mentioning the below details
  - Member Code
  - Member Name
  - Contact Person Name, Email Address, and Mobile Number
  - Segment for which NOTIS access is required
  - Static IP which will be used to access the API
  - UAT or LIVE access

  Upon receipt of the said details, the admin at NSEIL will verify and generate the user credentials i.e. the Consumer Key and Consumer Secret.

b) Once registered, the member/user will be emailed on the registered email id the username & password (Consumer Key and Consumer Secret) to access the token API in order to get token.

c) Using this token user can access and start using the Trade Inquiry API.

15. What is the Jiffy Time conversion utility used for?
   All timestamps provided via the NOTIS API's are in Jiffy format. The Jiffy Time conversion utility is a utility tool provided by the Exchange as a ready reference to members for conversation from jiffy format to regular time format.

16. How to access the sample Jiffy Time Conversion utility?
   Members may access the sample jiffy time conversion utility in the 'member trouble shooting guide' available on the Exchange website.
   Members will need to run the java-based file and use it for the necessary time conversion.

17. Are there any specific system requirements to ensure compatibility to the NOTIS API prior to designing the customized front ends/ interface?
   The Exchange protocol document provides the detailed manual and technical specifications to be met prior to designing the customized front ends/ interface.

18. Which Transport Layer Security (TLS) version be used for NOTIS API?
   Transport Layer Security (TLS) is the protocol which secures HTTPS. TLS provides secure communication between web browsers and servers. The leading browsers (Google, Mozilla and Microsoft Edge) have dropped support for the earlier versions of the protocol i.e., TLS 1.0 and TLS 1.1 due to it's security concerns. In regards to the same Exchange had also issued circular 42290 on "Decommissioning of support for TLS 1.0 & TLS 1.1 for NOTIS application". Members are suggested to use TLS 1.2 or above version for their NOTIS API application.

19. How to connect to NOTIS API after developing the application?
   Members are advised to refer the API protocol documents which provide step by step instructions to access Trade Inquiry and Actions Inquiry URL's. Members are also requested to refer the trouble shooting guide for basic troubleshooting. Alternately members may mail their specific queries to the trade helpdesk at msm@nse.co.in or use the helpdesk portal to raise a ticket for their query.
   However, members may note the Exchange will not be in a position to comment / guide/

assist members on the nature and choice of implementation of the functionalities mentioned in the API specification documents in the applications developed /deployed by the participants. While the Exchange endeavors to provide API specification related assistance on best effort basis for market participants benefit, it is advised that the service should not be used as a surrogate service for development of applications to be deployed at member end.

20. Does the Exchange have a list of approved/empaneled vendors providing NOTIS API solutions?
No. Exchange does not have any approved/empaneled vendor for providing NOTIS API solution to members.

21. Can two separate vendor applications be used simultaneously to download trade information from NOTIS application/API?
The Exchange does not impose any restrictions on members for use of NOTIS API service to download trade. Members can run multiple instances simultaneously after conducting necessary hygiene checks and following the usage guidelines as mentioned in the API specifications.
As mentioned in the API specifications, please note that when connecting for multiple segments or running multiple instances for NOTIS, the token is to be requested only once and shared for the number of instances being run, since the token generated is common for the member code/credentials. In case multiple tokens are generated on account of duplicate request being received from member end, member may encounter error 500 while accessing the API.

22. Are the Consumer Key and Consumer Secret for UAT and LIVE environment same?
No. The user credentials i.e. consumer key and consumer secret for UAT and LIVE are different. Hence the same consumer key and consumer secret for test scenario cannot be used for live scenario. Members are requested to ensure that they input the consumer key as Username and consumer secret as Password while accessing the API. In case incorrect credentials are used or configured at member end, members will get 401 error in response.

23. What are the ways in which the token can be generated to access NOTIS API?
The NOTIS API protocol document provides the detailed instructions to generate token. The steps for generating token to access NOTIS API are as below: -
   a) Access the below URLs for UAT/Live respectively
       UAT: https://www.devconnect2nse.com/token
       Production/LIVE: https://www.connect2nse.com/token
   b) Set the username (consumer key) and password (consumer secret) in Authorization tab
   c) REST service/API testing can be completed using Postman Tool or Talend API Tester (App from Google Chrome)

24. Does the token generated for accessing NOTIS API have any validity?
Members are requested to note that the token once generated is valid for 9 hours or 32400 seconds. The member should regenerate the token only after current token has expired to continue to request the trade/actions data via NOTIS API. Multiple token generation request even when token is valid may lead to removal of member's IP from whitelisting.

25. We have encountered an error / issue which is not covered in the trouble shooting guide? What are the next steps for seeking assistance in this regard?

Member may e-mail the details of the specific query or error to the MSM email helpdesk for necessary troubleshooting. The request should contain the below mentioned details which shall enable the helpdesk team to undertake the necessary analysis:

- Member Code
- Member Name
- Environment: UAT or LIVE
- Segment/s
- Static IP from which you logged in on NOTIS API.
- Issue / query in detail with relevant screenshots:
- Observation from Postman tool and exports of requests and response from Postman tool for analysis.
- Name of authorized person:
- Email id of authorized person:
- Contact details:

The issue shall be analyzed by the specialist team and resolution shall be provided to member in due course.

Please be advised that the Exchange shall not be able to provide assistance / troubleshoot issues encountered in internal applications of members. As mentioned in the API specifications, members are required to check in tools like postman / Talend API Tester for analysis from Exchange.

26. How to access the UAT Trade Inquiry API Service?

Please refer the API specs for detailed steps and URL for UAT environment in respective segment. Please note that UAT access is not available via Lease Line connectivity.

27. How to access the LIVE/Production Trade Inquiry API Service?

Please refer the API specs for detailed steps and URL for LIVE/Production environment in respective segment.

28. **"Under what scenarios is IP removed from whitelist?"**

Certain scenarios result in removal of IP from whitelist which means that member will not be able to access the API until IP is re-added to the whitelist. The said scenarios are mentioned below:

a) Members should limit requests to 15 seconds between each request to the Trade Inquiry API/token service.

b) Members should send requests to the API between 6:30 AM to 5:00 AM next day.

Note :- NOTIS services shall not be available between 5:00 AM to 6:30 AM due to maintenance activity.

29. I am unable to access the API due to removal of whitelisted IP, what should I do?

Certain scenarios result in removal of IP from whitelist which means that member will not be able to access the API until IP is re-added to the whitelist. In such a scenario, the member

should request the Exchange to whitelist the IP for resuming the service. In case the above scenarios are not applicable, the member is advised to reach out to the MSM helpdesk toll free number for further assistance or use the helpdesk portal to raise a ticket for their query.

30. Trade download suddenly stopped and our application is not receiving the latest trade or high latency/delay is observed in trade downloaded during the day. What are the next steps to analyze this issue / query?

To analyse the same, members are advised to capture the observation reported/exported from postman tool and share the same with the MSM helpdesk team on email at msm@nse.co.in . The issue shall be analyzed by the specialist team and resolution shall be provided to member in due course.

Members desirous of having more real time information on trade copy, may use Dropcopy as an alternate application. Dropcopy application is a stable and robust application. It disseminates trade details at members level and each user level on a real time basis. For more information regarding drop copy application member may refer to FAQ document under the URL - https://www.nseindia.com/trade/trade-drop-copy-facility-faqs .

31. Duplicate/ Double data is being downloaded in NOTIS API. How to resolve this issue?

Please note that the original trade messages are downloaded via transcode 6001. Client code modification messages are sent in transcode 5445 in same structure. Please check your implementation for handling of the aforesaid transcodes.

Further for trade modification, in case the buyer / seller broker modifies the trade i.e. client code modification, the trade modification message with transcode 5445 is also being sent to the counterparty broker i.e. seller / buyer without any change of original client code in the modification message. Members need to handle this at their application end.

32. We are a clearing member and are missing few trade details for our Custodial participant clients in NOTIS API. What could be the issue?

Please note the current behaviour of NOTIS API in this regard.

- If a trade has been executed in "X" CP code and later modified by the executing member to CP code "Y" and you are a clearing member for "Y" CP code.
- The trading Member shall receive all information of original trade in trades url as well as CP code modification in the Actions URL.
- The Clearing member for CP Code "Y" will receive only the modification information in the Action URL.
- The Clearing Member for CP code "Y" will not receive the original trade information as the trade was executed in CP code "X"

Accordingly, clearing member may check with the executing broker member in case they have done any CP code modification with the Clearing corporation for the trades in question.

33. How to resolve 500 error?

This error is generally observed when two tokens are generated for the same consumer key/secret. As the token generated is common for the member code/credentials, members while connecting via NOTIS API, need to ensure that when connecting for multiple segments for NOTIS, the token is to be requested only once and shared for the number of instances or segments being run at member end. The token once generated is valid for 9 hours or 32400 seconds, and members need to regenerate the token only after current token has expired to continue to request the trade/actions data.

34. **How to resolve Error Code 500 with the message "Incorrect result size: expected 1, actual 2".?**
This issue could arise in case multiple requests are sent by member for token creation. Please note that the Exchange has rolled out an enhancement for convenience of members w.e.f EOD of May 31, 2021 which allows member to retry after 2 seconds for creation of fresh token after facing such an error. Members need not send any separate communication to the Exchange for reset of the existing duplicate token created.

35. How to resolve 401 error while generating token?
Error 401 is reported when, either credentials used are incorrect or the request is being sent from IP which is not whitelisted at the Exchange end. Accordingly, members are requested to check these two parameters at their end. Further, the detailed steps with screenshots are provided in the **'member trouble shooting guide' made available in the** latest protocol documents for NOTIS API. In case the query persists, member may reach out to the MSM helpdesk toll free number and provide relevant details for analysis and further assistance. Members may also use helpdesk portal to raise a ticket for their query.

36. How to resolve issue of receiving previous day trade while generating data for current day?
To resolve the same members are advised to capture the observation reported/exported from postman tool and share the same with the trade helpdesk team on email at msm@nse.co.in . The issue shall be analyzed by the specialist team and resolution shall be provided to member in due course.