

National Stock Exchange of India Limited

Circular

Department: FUTURES & OPTIONS	
Download Ref No: NSE/FAOP/58695	Date: September 29, 2023
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All Members,

Encryption/Decryption of Interactive Messages

Currently, members connect to Exchange Trading System using Exchange provided NEAT Adapter / NEAT application or via Direct Connection as per the specifications of Exchange NNF API protocol.

To enhance the security posture for interactive messages, encryption of these messages on an end-to-end basis is necessary. Accordingly, a software solution-based approach (a combination of TLS 1.3 security protocol and AES-256 bits GCM Mode-based symmetric encryption) is being implemented for encryption of interactive message traffic between member applications and Exchange. While encryption of messages within member environment towards their clients will need to be done by respective members.

Important instructions for implementation of the above:

1. An interim coexistence phase for accepting both encrypted and non-encrypted message traffic shall be provided by the Exchange, after which Exchange shall discontinue the non-encrypted message flow.
2. Details of coexistence and migration plan for Neat Adapter / NEAT and Direct connection via NNF are as below:

Functionality	Date
Release of New Interactive parameters for Encrypted flow for NEAT Adapter and Direct Connection via NNF	October 07, 2023
Release of new NEAT Adapter and NEAT versions with Encryption	October 07, 2023
Discontinuation of Existing versions of NEAT Adapter and NEAT for non-encrypted flow	Mock in December 2023
Discontinuation of non-encrypted flow for Direct connection users	Mock in January 2024

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3. Members are requested to refer the below parameters for interactive session for non-encrypted and encrypted data flows for Futures & Options Segment:

Parameters		Non-encrypted Flow	Encrypted Flow
Gateway Router	IP Address	172.19.13.85	172.19.13.85
	Port	10825	10827
Gateway IPs Subnet ranges	Network	172.19.13.0	172.19.13.0
	Mask	255.255.255.128	255.255.255.128
	Port	10820	10820

4. Members using via Direct connection via NNF API protocols shall be required to download a CA certificate for validation of Gateway Router server certificate from the extranet path /faoftp/faocommon/Encryption_CA_Certificate. The CA certificate shall be available for download from October 06, 2023 at 18:00 hours onwards.
5. Direct connection user can use the above certificate to verify the Gateway Router server certificate after SSL connection with Gateway Router. It is an additional step to ensure that direct connection user is connected to authenticated Gateway Router.
6. For further details of implementation, members may refer the latest NNF API document (Version 9.36) detailing the encryption protocol is available on Exchange website under path: https://static.nseindia.com/s3fs-public/inline-files/TP_FO_Trimmed_NNF_PROTOCOL_9.36_0.pdf
7. For members connecting via NEAT Adapter (NA) and NEAT application, please note that new versions shall be released with relevant certificates pre-installed within the applications for encrypted flow. NA shall perform the verification of Gateway Router server certificate after successful SSL connection with Gateway Router.
8. Details of the applicable Neat Adapter (NA) and NEAT versions shall be communicated vide separate circular.

For and on behalf of
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