

National Stock Exchange of India Limited

Circular

Department: CAPITAL MARKET SEGMENT	
Download Ref No: NSE/CMTR/59089	Date: October 26, 2023
Circular Ref. No: 136/2023	

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-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	November 04, 2023
Release of new NEAT Adapter version with Encryption	November 04, 2023
Discontinuation of Existing version of NEAT Adapter for non-encrypted flow	Mock of January 2024
Discontinuation of non-encrypted flow for Direct connection users	Mock of 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 Capital market Segment:

Parameters		Non-encrypted Flow	Encrypted Flow
Gateway Router	IP Address	172.19.12.85	172.19.12.85
	Port	10815	10817
Gateway IPs Subnet ranges	Network	172.19.12.0	172.19.12.0
	Mask	255.255.255.128	255.255.255.128
	Port	10810	10810

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 /common/Encryption_CA_Certificate. The CA certificate shall be available for download from November 3, 2023 at 18:00 hour 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 5.4) detailing the encryption protocol is available on Exchange website under path: https://nsearchives.nseindia.com/web/sites/default/files/inline-files/TP_CM_Trimmed_NNF_PROTOCOL_5.4.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
National Stock Exchange of India Limited

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