
NATIONAL COMMODITY & DERIVATIVES EXCHANGE LIMITED

Circular to all members of the Exchange

Circular No. : NCDEX/Member Tech Compliance-008/2025

Date : April 04,2025

Subject : Master Circular – Member Cyber Security related Compliance

1. This Master circular is a compilation of relevant circulars pertaining to “Cyber Security” issued by the Exchange which are operational as on date of this circular. Applicable provisions of existing circulars issued till March 31, 2025 are consolidated in this Master Circular.
2. It is hereby clarified that in case of any inconsistency between this Master Circular and the original applicable circular, the content of the original circular shall prevail.
3. Notwithstanding any revision in the processes or formats, if any -
 - a) anything done or any action taken or purported to have been done or taken under such revised/ rescinded process including but not limited to any regulatory inspection/ investigation or enquiry commenced or any disciplinary proceeding initiated or to be initiated under such rescinded/ revised process or rescission, shall be deemed to have been done or taken under the corresponding provisions of this Master Circular;
 - b) the previous operation of the rescinded process or circular or anything duly done or suffered thereunder, any right, privilege, obligation or liability acquired, accrued or incurred thereunder, any penalty incurred in respect of any violation of such rescinded process or circulars, or any investigation, legal proceeding or remedy in respect of any such right, privilege, obligation, liability, penalty as aforesaid, shall remain unaffected as if the rescinded process or circulars have never been rescinded.
4. All Members, clients and market participants are requested to take note of the same.

For and on behalf of

National Commodity & Derivatives Exchange Limited

Ravindra Shetty

Senior Vice President – Member Tech Compliance

For further information, / clarifications, please contact

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1. Cyber security Incident reporting and Information sharing

Background

Cyber Incident Reporting is formal recording of facts related to cyber incidents occurred at the member end. Quarterly reports contain information on cyber-attacks and threats experienced by Stock Brokers / Depository Participants and measures taken to mitigate vulnerabilities, threats and attacks including information on bugs / vulnerabilities / threats that may be useful for other Stock Brokers / Depository Participants. Members are required to submit the said information to Stock Exchanges / Depositories on quarterly basis as per the format prescribed in SEBI circular.

SEBI had issued a circular no. SEBI/HO/MIRSD/DOP/CIR/P/2019/109, dated October 15, 2019 prescribing format for quarterly reports containing information on cyber-attacks and threats experienced by Stock Broker and the timelines for submission of such reports. Accordingly, Exchange vide its circular no. NCDEX/TECHNOLOGY-065/2018 dated December 04, 2018 and circular no. NCDEX/RISK- 002/2019 dated October 18, 2019 had reiterated submission of duly filled quarterly report vide email on “infosec@ncdex.com” within the prescribed timelines. The circular also prescribes qualification requirements for auditors and periodicity of audit of cyber security framework. Timelines are as given below:

| Sr. No. | Reporting Quarter in Financial Year | Reporting Quarter Dates | Due Date / Last Date for the submission of the report by the Member. |
|---------|-------------------------------------|--------------------------|--|
| 1 | Q1 | 1 April to 30 June | 15 th July |
| 2 | Q2 | 1 July to 30 September | 15 th October |
| 3 | Q3 | 1 October to 31 December | 15 January |
| 4 | Q4 | 1 January to 31 March | 15 th April |

Following are the relevant circulars issued by SEBI & the Exchange:

SEBI Circular:

- [SEBI/HO/MIRSD/TPD/P/CIR/2022/93](#) dated June 30, 2022
- [SEBI/HO/MIRSD/TPD/P/CIR/2022/80](#) dated June 07, 2022
- [SEBI/HO/MIRSD/DOP/CIR/P/2019/109](#) dated October 15, 2019
- [SEBI/HO/MIRSD/CIR/PB/2018/147](#) dated December 03, 2018

Exchange Circular:

- [NCDEX/Member Tech Compliance-002/2025](#) dated January 09, 2025
- [NCDEX/RISK- 006/2022](#) dated August 24, 2022
- [NCDEX/RISK- 005/2022](#) dated July 01, 2022
- [NCDEX/RISK- 002/2021](#) dated April 30, 2021
- [NCDEX/RISK- 002/2020](#) dated September 22, 2020
- [NCDEX/RISK- 002/2019](#) dated October 18, 2019
- [NCDEX/RISK-001/2019](#) dated July 18, 2019
- [NCDEX/TECHNOLOGY-065/2018](#) dated December 04, 2018

2. Cyber Security & Cyber Resilience framework for Stock Brokers / Depository Participant

Background

Cyber Security and Cyber Resilience audit report presents critical information about cybersecurity threats, risks within a digital ecosystem, gaps in security controls, and the performance of security programs highlighted by the auditor.

The Cyber Security and Cyber Resilience audit report is required to be submitted to the Exchange in digitally signed soft copy within the timelines indicated in circular by the member. Members using CTCL/IBT/STWT facility/ Members trading through the Exchange provided Traded Work Solution (TWS) – Type of Broker – I / II are required to submit reports on yearly basis. Further, all the members using ATF Facility – Type of Broker – III, are required to conduct audit on half-yearly basis.

The guidelines annexed was effective from April 1, 2019.

- The members are advised to submit the following documents in a digitally signed soft copy in PDF format to the Exchange:
 1. Cyber Security and Cyber Resilience Audit Report (**Annexure A**) along with Executive summary (**Annexure B**).

Download Link Annexure A & B – https://ncdex.com/quick_links/download

2. Action Taken Report, if applicable.
3. Follow-on report with management comments if applicable (Annexure C), as per the time line provided.

Non/late submission of Cyber Security and Cyber Resilience Audit Report shall attract penal charges as mentioned in the Circular.

Following are the relevant circulars issued by SEBI & the Exchange:

SEBI Circular:

- [SEBI/HO/MIRSD/DOP/CIR/P/2019/109](#) dated October 15, 2019
- [SEBI/HO/MIRSD/CIR/PB/2018/147](#) dated December 03, 2018

Exchange Circular:

- [NCDEX/Member Tech Compliance-009/24](#) dated October 14, 2024
- [NCDEX/Member Tech Compliance-003/2024](#) dated May 03, 2024
- [NCDEX/Member Tech Compliance-002/2024](#) dated February 05, 2024
- [NCDEX/Member Tech Compliance-007/23](#) dated October 27, 2023
- [NCDEX/Member Tech Compliance-005/23](#) dated October 09, 2023
- [NCDEX/RISK- 006/2023](#) dated May 18, 2023
- [NCDEX/RISK- 007/2022](#) dated September 28, 2022

3. Vulnerability Assessment and Penetration Testing (VAPT)

Background

VAPT stands for Vulnerability Assessment and Penetration Testing. It is the process of scanning for vulnerabilities and exploiting them to evaluate a system's security posture. VAPT gives a more detailed view of the threats that network or application is facing. It helps enterprises to protect their data and systems from malicious attacks. VAPT is important tool to accomplish compliance standards. VAPT protects the business from data loss arising out of unauthorized access.

Members needs to appoint external agency (CERT-In empaneled organizations) in order to conduct VAPT assignment.

With respect to the above provision, Stock Exchanges in consultation with SEBI, clarified that the VAPT shall be carried out and completed during the period September to November of every financial year and the final report on said VAPT shall be required to be submitted to the Stock Exchanges within one month from the date of completion of VAPT after approval from Technology Committee of respective Stock Brokers. In addition, Members should perform Vulnerability Assessment and Penetration Testing prior to the commissioning of a new system that is accessible over the internet.

Following are the relevant circular issued by SEBI & the Exchange:

SEBI Circular:

- [SEBI/HO/MIRSD/CIR/PB/2018/147](#) dated December 03, 2018

Exchange Circular:

- [NCDEX/Member Tech Compliance-007/24](#) dated September 16,2024
- [NCDEX/Member Tech Compliance-004/23](#) dated September 22, 2023
- [NCDEX/Member Tech Compliance-003/23](#) dated August 21, 2023
- [NCDEX/RISK- 006/2022](#) dated August 24, 2022
- [NCDEX/RISK- 003/2022](#) dated June 16, 2022
- [NCDEX/TECHNOLOGY-065/2018](#) dated December 04, 2018

4. Advisory for Financial Sector regarding Software as a Service based solutions

Background

Software as a Service (SaaS) is also known as "**On-Demand Software**". It is a software distribution model in which a cloud service provider hosts services. These services are available to end-users over the internet so, the end-users do not need to install any software on their devices to access these services.

Under guidance received from SEBI as per circular no. SEBI/HO/MIRSD2/DOR/CIR/P/2020/221 dated November 03, 2020 & subsequent Amber advisory from CERT-In – 201155100308, Members have to confirm that whether specified confidential data and data types (as specified in the CERT-In advisory) are hosted/ not hosted on SaaS provider/ use or does not use any SaaS based GRC solutions on half yearly basis as per the prescribed format.

Following are the relevant circulars issued by SEBI & the Exchange:

SEBI Circular:

- [SEBI/HO/MIRSD2/DOR/CIR/P/2020/221](#) dated November 03, 2020

Exchange Circular:

- [NCDEX/Member Tech Compliance-003/25](#) dated January 21, 2025
- [NCDEX/Member Tech Compliance-006/24](#) dated July 18, 2024
- [NCDEX/Member Tech Compliance-001/2024](#) dated January 10, 2024
- [NCDEX/Member Tech Compliance-001/2023](#) dated July 13, 2023
- [NCDEX/RISK-001/2023](#) dated January 24, 2023
- [NCDEX/RISK-008/2022](#) dated October 20, 2022
- [NCDEX/RISK-004/2020](#) dated November 12, 2020

5. Framework to address the ‘technical glitches’ in Member’s Electronic Trading Systems

Background

The Members of the Exchange, through various circulars, and guidelines, issued from time to time, have been required to put in place various measures / controls, to prevent system failures and to ensure the provision of seamless service / facilities to their clients. In furtherance to the above, in consultation with SEBI and other Exchanges, it has been decided to issue guidelines / Standard Operating Procedure (SOP) for handling technical glitches at the Members end as well as provide a framework for Capacity Planning, Software Testing, Change management and Business Continuity Planning (BCP) / Disaster Recovery (DR).

The top 20 Members registered with the Exchange, having the most Internet and Wireless technology based (IBT/STWT) clients are classified as ‘Specified Members’ for this purpose. In adherence to the above and in consultation with other Exchanges, 35 Members have been identified as ‘Specified Members’.

In specific, points 3.viii, [4.vi](#), 5.i, 5.ii, 5.iii, 6.v, 6.xiii, 6.xiv are only applicable to ‘Specified Members’, over and above the other points as stated in ‘Annexure-A’ of the circular no. NCDEX/RISK-010/2022 dated December 16, 2022.

Technical Glitches:

‘Technical glitch’ shall mean any malfunction in the Member’s systems including malfunction in its hardware, software, networks, processes, or any products or services provided by the Member in the electronic form. The malfunction can be on account of inadequate Infrastructure/systems, cyberattacks/incidents, procedural errors, and omissions, or process failures or otherwise, in their own systems or the one outsourced from any third parties, which may lead to either stoppage, slowing down or variance in the normal functions/operations/services of systems of the Member for a contiguous period of five minutes (5 minutes) or more.

‘Critical Systems’ are defined as all IT systems that are related to Trading applications and trading-related services.

All Members shall be required to report to the Exchange any technical glitches as under:

- i. All Members shall inform about the technical glitch to the stock exchanges immediately but not later than 1 hour from the time of occurrence of the glitch.

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- ii. Members shall submit a Preliminary Incident Report to the Exchange within T+1 day of the incident ('T' being the date of the incident). The report shall include the date and time of the incident, details of the incident, effect of the incident, and immediate action taken to rectify the problem.
 - iii. Members shall submit a Root Cause Analysis (RCA) Report of the technical glitch to the stock exchange, within 14 days from the date of the incident. The RCA report, for all technical glitch incidents greater than 45 minutes, shall also be verified by an independent auditor appointed by the Member.

Submission of all the above three reports shall be as per the format provided in 'Annexure-B' of the SEBI circular.

The members reporting the incident pertaining to technical glitch should send aforementioned documents via email to the specified email id - infotechglitch@nse.co.in . Members should submit the documents as specified.

Capacity Planning:

- i. Increasing number of investors may create an additional burden on the trading system of Members and hence, adequate capacity planning is a prerequisite for Members to provide continuity of services to their clients.
- ii. Members shall do capacity planning for the 'Critical Systems' infrastructure including server capacities, network availability, and the serving capacity of trading applications.
- iii. Capacity planning shall be done based on the rate of growth in the number of transactions observed in the past 2 years. This data should be extrapolated to predict the capacity required for the next 3 years.

Software testing and change management:

- i. Software applications are prone to updates/changes and hence, it is imperative for the Members to ensure that all software changes that are taking place in their applications are

rigorously tested before they are used in production systems. Software changes could impact the functioning of the software if adequate testing is not carried out. In view of this, Members shall adopt the following framework for carrying out software-related changes/testing in their systems.

- ii. Members shall create test-driven environments for all types of software developed by them or their vendors.

Monitoring mechanism – Applicable to ‘Specified Members’

- i. Proactively and independently monitoring technical glitches shall be one of the approaches in mitigating the impact of such glitches. In this context, the ‘Specified Members’ shall build API-based

Logging and Monitoring Mechanism (LAMA) to allow stock exchanges to monitor the ‘Key Parameters’ of the ‘Critical Systems’. Under this mechanism, ‘Specified Members’ shall monitor key systems & functional parameters to ensure that their trading systems function in a smooth manner. Stock exchanges will, through the API gateway, independently monitor these key parameters in real-time to gauge the health of the ‘Critical Systems’ of the ‘Specified Members’.

- ii. The ‘Specified Members’ and the Exchange will preserve the logs of the key parameters for a period of 30 days in the normal course. However, if a technical glitch takes place, the data related to the glitch shall be maintained for a period of 2 years.

Business Continuity Planning (BCP) and Disaster Recovery Site (DRS):

- i. ‘Specified Members’ and Members with a minimum client base of 50,000 clients across all Exchanges, are to mandatorily establish a ‘Business Continuity’/ ‘Disaster Recovery setup’.
- ii. Members shall put in place a comprehensive BCP-DR policy document outlining standard operating procedures to be followed in the event of any ‘Disaster’.
- iii. ‘Disaster’ may be defined as scenarios where:
 - a. A 45-minute disruption of any of the ‘Critical Systems’, or
 - b. Any additional criteria specified by the Governing Board of the Member.

Following are the relevant circulars issued by SEBI & the Exchange:

SEBI Circular:

- [SEBI/HO/MIRSD/TPD-1/P/CIR/2022/160](#) dated November 25, 2022

Exchange Circular:

- [NCDEX/Member Tech Compliance-006/2025](#) dated March 28, 2025
- [NCDEX/Member Tech Compliance-005/2025](#) dated January 30, 2025
- [NCDEX/Member Tech Compliance/008-23](#) dated December 26, 2023
- [NCDEX/Member Tech Compliance-002/2023](#) dated July 28, 2023
- [NCDEX/RISK-004/2023](#) dated March 13, 2023
- [NCDEX/RISK-010/2022](#) dated December 16, 2022
- [NCDEX/RISK- 009/2022](#) dated December 05, 2022
- [NCDEX/RISK- 005/2021](#) dated December 22, 2021

6. Framework for Adoption of Cloud Services by SEBI Regulated Entities (REs)

Background

In recent times, the dependence on cloud computing for delivering the IT services is increasing. While cloud computing offers multiple advantages viz. ready to scale, ease of deployment, no overhead of maintaining physical infrastructure etc., the SEBI Regulated Entities (REs) are expected to be aware of the new cyber security risks and challenges which cloud computing introduces.

Following are the relevant circulars issued by SEBI & the Exchange:

SEBI Circular:

- [SEBI/HO/ITD/ITD_VAPT/P/CIR/2023/033](#) dated March 06, 2023

Exchange Circular:

- [NCDEX/RISK-003/2023](#) dated March 10, 2023

7. Advisory for Stockbroker – Member onboarding for CERT-In Cyber Swachhta Kendra (CSK)

Background

In recent times, there has been a surge in cyber-attacks in organizations across the globe impacting the continuity of their business operations and causing sensitive data leakage through malware infections at end point computing devices. To mitigate such malware and botnet infections, CERTIn has launched an initiative named 'Cyber Swachhta Kendra' (CSK) which provides information and enables organizations to disinfect the computing devices using free-of-cost malware and botnet cleaning tools.

In view of the above and to create a secure cyber eco-system, Stockbrokers providing Internet Based Trading platform and with more than 50,000 active traded clients are required to onboard themselves on 'Cyber Swachhta Kendra' Platform by November 06, 2023. Other members (not part of the above criteria) can also voluntarily subscribe to the services and avail actionable information intelligence from CSK.

For receiving the reports/alerts from Cyber Swachhta Kendra on daily basis, Stockbrokers are required to follow the certain procedure mention in the circular:

Following are the relevant circulars issued by the Exchange:

Exchange Circular:

- [NCDEX/Member Tech Compliance-008/24](#) dated October 11, 2024
- [NCDEX/Member Tech Compliance-006/23](#) dated on October 18, 2023

8. Advisory for Contribution of Information to RBI- FinTech Repository

Background

The EmTech repository portal is designed for the entities regulated by RBI such as banks and NBFCs, whereas the FinTech Repository aims to capture essential information of both regulated and unregulated entities. The purpose of the repository is to enhance understanding of the Indian FinTech sector from a regulatory perspective and facilitate the design of appropriate policy frameworks. The repositories being managed by the Reserve Bank Innovation Hub (RBIH), a wholly owned subsidiary of RBI, aims to provide aggregate sectoral data, trends, and analytics that will be beneficial for both policymakers and industry participants.

In this regard, SEBI has advised Exchanges to encourage their trading members to contribute information regarding the technological applications to FinTech Repository. The FinTech repository is accessible at the URL: <https://fintechrepository.rbihub.in>.

All Trading Members are advised to take note of the above advisory and requested to contribute information regarding the technological applications to FinTech Repository.

For further details on the repositories or assistance with submissions, trading members are requested to refer support details available on RBI hub/fintech website.

Exchange Circular:

- [NCDEX/Member Tech Compliance-004/2025](#) dated on January 27, 2025

9. Enhancement of API Authentication & Security for Exchange Empanelled Vendors (EV) and Application Service Providers (ASP's) and for trading members.

Background

This is with reference to SEBI circular No.: SEBI/HO/MIRSD/CIR/PB/2018/147 dated December 3, 2018, and subsequent circulars regarding Cyber Security & Cyber Resilience framework for Stockbrokers. Securities Market organizations have been experiencing cyber-attacks which are rapidly growing in frequency and complexity.

Additionally, on analysis of these cyber-attacks reported by members in the past, it has been observed that these issues occurred due to vulnerable APIs used as part of the software products/services. To avoid occurrence of such cyber incidents and ensure secure usage of API, members are advised to adopt the following best practices.

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Securities Market participants and entities have been experiencing cyber-attacks/incidents which are rapidly growing in frequency and complexity. In view of the recent cyber-attacks/incidents reported to Exchanges, it is observed that several instances of Cyber-attacks were due to exploitation of vulnerabilities found in Application Programming Interface (APIs) which is used for critical products/applications at members' end. These vulnerabilities could result in sensitive data leakage or may cause business disruption due to unauthorized access of these APIs by threat actors.

Considering the seriousness of these security incidents attributed to vulnerable APIs used as a part of the software products/applications, the Exchange empanelled software vendors and ASPs are required to follow the below mentioned best practices.

Maintain Inventory of API: Inventory of API including ownership, criticality/impact of API shall be maintained.

Strong Authentication Mechanisms: Employ strong & mutual authentication mechanisms such as API keys, OAuth, or IWT, ensuring secure token management practices and setting appropriate expiration times.

Centralized API Security: Establish an API gateway for centralized security enforcement and a web application firewall (WAF) to protect against common web threats. Implement an API security

gateway for both internal and external APIs. Disable any public API lacking secure authentication or strengthen it as per best practices at the earliest.

Data Protection and Secure Communication: Prioritize data protection by encrypting sensitive data, applying data masking techniques and using secure communication protocols to prevent eavesdropping and information leakage. Additionally, integrity checks through checksum or digital signature should be implemented to ensure data integrity & to avoid data manipulation/MITM.

Input Validation and Output Encoding: Validate and sanitize user inputs to prevent injection attacks and encode output to protect against HTML/JavaScript injection.

Rate Limiting and Throttling: Implement rate limiting and throttling mechanisms to prevent abuse and DDoS attacks, limiting requests from a single client within a specific time frame.

Error Handling and Logging: Ensure proper error handling and comprehensive logging for monitoring and auditing purposes.

Cross-Origin Resource Sharing (CORS): Configure CORS properly to restrict unauthorized cross-origin requests.

Secure Storage of Secrets: Do not Store or Transmit API keys, credentials and sensitive data without secure encryption and access controls.

Regular Security Assessments: Conduct regular security assessments, including penetration testing, security audits, and code reviews. All APIs need to be assessed for security weakness/vulnerabilities and the checks should be aligned to OWASP Top 10 API security framework.

Documentation: Maintain clear documentation on secure API usage, including examples of proper authentication and authorization methods. For APIs facilitating sensitive business flows access shall be restricted on need-to-know basis.

Privacy Protection: Minimize data collection to essential information, comply with relevant privacy regulations and obtain user consent for data processing. Integrate privacy considerations from the initial stages of API development, performing a Privacy Impact Assessment (PIA) to identify and mitigate potential privacy risks.

Secure Software Development Lifecycle (SDLC): Integrate security considerations into the entire API development process and conduct security training for developers to promote secure coding practices.

Annual Software Audit (ISO 12207:2017): Conduct an annual software assessment as per ISO 12207:2017 standards for Systems and Software Engineering.

All Exchange Empaneled vendors/ASPs are required to comply with the above best practices.

SEBI Circular:

- [SEBI/HO/MIRSD/CIR/PB/2018/147](#) dated December 3, 2018

Exchange Circular:

- [NCDEX/Member Tech Compliance-004/24](#) dated on July 12, 2024
- [NCDEX/Member Tech Compliance-005/24](#) dated on July 12, 2024