

National Stock Exchange of India Limited

Circular

| Department: MEMBER SERVICE DEPARTMENT | |
|---------------------------------------|----------------------|
| Download Ref No: NSE/MSD/67754 | Date: April 29, 2025 |
| Circular Ref. No: 23/2025 | |

All Members,

Sub: Connectivity - Consolidated Circular

Exchange has been issuing various circulars from time to time for content relating to Connectivity. This consolidated circular replaces earlier consolidated circular NSE/MSD/61837 dated April 30, 2024, on the captioned subject. This Consolidated circular is prepared which is a compilation of subsequent circulars related to Connectivity issued till April 28, 2025. This consolidated circular encapsulates regulations / instructions of all earlier circulars issued by Exchange from time to time and new instructions as applicable.

Trading members can access the trading system through POP (Point of Presence) based Leased Line connectivity and Colocation Facility. The circular covers all aspects of connectivity offering via POP (Point of Presence) based Leased Line connectivity. Circulars for matters pertaining to Colocation are to be referred to separately.

Participants may note that the Exchange is not a telecom service provider, however, to facilitate its participants to procure connectivity to its trading system, the Exchange has appointed SIFY Technologies Limited as Telecom Network Integrator (TNI) for ownership, management and implementation and for providing end-to-end telecom network connectivity (Last mile connectivity for members). **It is solely a participant's responsibility to procure and maintain their network architecture, assets, and connectivity.** Participants should note that **National Stock Exchange of India Limited ("NSEIL") is only a facilitator of this service** via Telecom Network Integrator (TNI). Neither NSEIL nor its directors, managers, officers, employees, or agents guarantee the **functioning of the connectivity, SLAs, uptime etc. ("Service")** provided by Telecom Network Integrators and last mile telecom service providers. NSEIL does not warrant the accuracy, adequacy or completeness of this Service and expressly disclaims liability for errors or omissions in the same. NSEIL does not provide any warranty of an express or statutory nature including but not limited to the warranties of title, merchantability, fitness for a particular purpose or for any non-performance or interruption or incidents in relation to the Service. In no event, will NSEIL be liable for any damages, including without limitation direct or indirect, special, incidental, or consequential damages, losses or expenses arising in connection with this Service or use thereof or inability to use by any party, or in connection with any failure of performance, error, omission, interruption and/or defect. Participants shall take due care and shall solely be responsible for creating back-ups in terms of connectivity with NSEIL.

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In case of any queries clarification relating subject, please contact us on 1800 266 0050 / msm@nse.co.in

For and on behalf of

National Stock Exchange of India Limited

Bharat Gandhi

Chief Manager

| | |
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List of rescinded sections or items of relevant circulars till March 31, 2025, with rescissions

With the issuance of this Consolidated circular, the information contained in the list below shall stand rescinded.

| Sr. No. | Subject | Download No. | Date |
|---------|------------------------------------------------------------------------------------------------------------------|----------------|-----------|
| 1 | Migration from X.25 protocol to TCP/IP | NSE/memb/10833 | 13-Jun-08 |
| 2 | Application for VSAT migration from X.25 protocol to TCP/IP protocol | NSE/memb/10884 | 25-Jun-08 |
| 3 | TCP-IP migration - Discontinuation of X.25 protocol | NSE/memb/12380 | 8-May-09 |
| 4 | IP Connectivity for Category T (Tick by Tick) | NSE/memb/13599 | 3-Dec-09 |
| 5 | Revision in Annual recovery charges for A category (40 messages), S category (Connect2NSE) Leased Lines and VSAT | NSE/FA/21718 | 17-Sep-12 |
| 6 | Charges for Multicast Tick by Tick | NSE/MEM/32599 | 17-Jun-16 |
| 7 | Discontinuation of TCP based Tick by Tick market data broadcast | NSE/MEM/33698 | 25-Nov-16 |
| 8 | Consolidated circular for Multi-Protocol Label Switching (MPLS) connectivity | NSE/MSD/35154 | 20-Jun-17 |
| 9 | Discontinuation of Advance collection of service charges | NSE/MSD/36031 | 5-Oct-17 |
| 10 | Multicast Tick by Tick (MTBT) data subscription (To be referred for discontinuation of charges for MTBT) | NSE/MSD/38190 | 29-Jun-18 |
| 11 | Connectivity - Discontinuation of VSAT services | NSE/MSD/41769 | 2-Aug-19 |
| 12 | Connectivity - Revised Bandwidth options | NSE/MSD/42272 | 1-Oct-19 |
| 13 | Connectivity - Extension of VSAT Services | NSE/MSD/44024 | 31-Mar-20 |
| 14 | Connectivity - Discontinuation of MPLS services | NSE/MSD/47321 | 12-Feb-21 |

Notwithstanding such rescission

- Anything done or any action taken or purported to have been done or contemplated under the rescinded guidelines before the commencement of this Master Circular shall be deemed to have been done or taken or commenced or contemplated under the corresponding provisions of the Master Circular or rescinded guidelines whichever is applicable.
- The previous operation of the rescinded guidelines or anything duly done or suffered thereunder, any right, privilege, obligation or liability acquired, accrued or incurred under the rescinded guidelines, any penalty, incurred in respect of any violation committed against the rescinded guidelines, 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 guidelines have never been rescinded.

National Stock Exchange of India Limited

CONSOLIDATED CIRCULAR
ON CONNECTIVITY

APRIL 2025
NATIONAL STOCK EXCHANGE OF INDIA LTD

National Stock Exchange of India Limited

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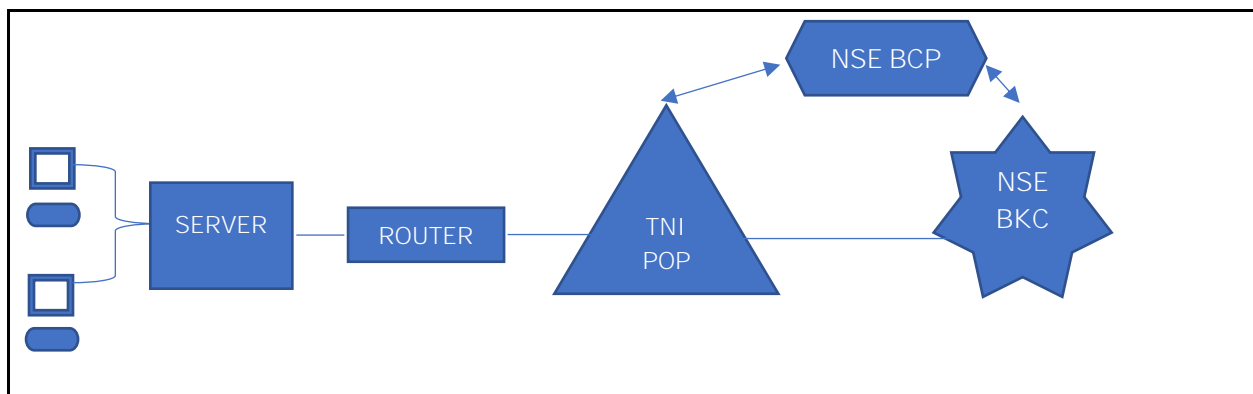
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I. Leased Line [LL] Connectivity:

Trading Members spread over a wide geographical area can connect to the Exchange trading system via POP (Point of Presence) based Leased Line connectivity.

Leased lines are terrestrial based connectivity available through POPs (POP's are established by the Telecom Network Integrator (TNI) at different locations, to enable member connectivity to the Exchange trading server). The TNI offers both conventional wired last mile connectivity (POP leased line from POP to members premises and/or rack in datacentre) and wireless last mile connectivity option. The network uses TCP/IP protocol based Wide Area Network facilitating higher bandwidth, expansion, and scalability. Wireless option is provided by the TNI with the existing Telecom service providers for locations which are not feasible under wired connectivity.

Schematic representation of Leased line set up:



The above image is for representation purposes only. POP: Point of Presences. TNI: Network Integrator (SIFY Technologies Limited)

A. Telecom Network Integrator:

The Exchange has appointed SIFY Technologies Limited as Telecom Network Integrator (TNI) for implementing network with multiple service providers and various point of presence (POP) across India. Members may note that from 1st January, 2024, all the activities related to POP network (ownership and Management), last mile connectivity, shall be under the purview of TNI including service, support, troubleshooting and other such ancillary activities. A complete handbook on SIFY Technologies Limited is available in Annexure 1 – SIFY HANDBOOK. For more information, members can browse through ‘Sify Aakash portal’ of TNI dedicated for enabling members who are allowed by the Exchange to seek connectivity from the TNI.

B. Point of presence (POPs) for POP based LL connectivity:

Point of Presences are owned and managed by TNI at different locations, to enable member connectivity to the Exchange trading server. Members traffic is seamlessly routed to either NSE primary site in Mumbai or the BCP site. Members can connect to various POP locations by choosing various connectivity options as defined in sections II A that are available through several telecom service providers. Current List of POPs along with their complete address is provided in Annexure 2 - List of POPs.

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NOTE: POP networks are expanded to more cities to boost local connectivity, and such updated list shall be shared by TNI and Exchange from time to time.

C. Telecom Service providers for Leased Line connectivity:

Currently following telecom service providers are available:

1. TATA Communications limited (TCL).
2. Bharati Airtel Limited.
3. MTNL/BSNL.
4. Tikona Infinet Private Limited. *
5. Microscan Infocommtech Private Limited. *

* Tikona and Microscan are for Self Service Mode Only.

NOTE: New vendors shall be added by the TNI in coordination with Exchange subject to technical feasibility once eligibility criteria are fulfilled by the telecom service providers.

D. Types of service models under Leased Lines:

Members are provided with two options of service models for their POP based LL connectivity:

- a. MANAGED SERVICE MODEL.
- b. SELF SERVICE MODEL.

a. Managed Service model:

- a. Last mile leased lines (POP leased line from POP to members premises and/or rack in datacentre) shall be owned and managed by Sify (TNI).
- b. Member shall procure last mile router (CPE) from TNI directly as per published rate card
- c. TNI shall manage Last mile leased lines and routers and SLA.

b. Self Service model:

- a. Last mile leased lines (POP leased line from POP to members premises and/or rack in datacentre) shall be owned and procured by member.
- b. Member shall procure last mile router (CPE) from open market adhering to technical specifications provided by Sify(TNI). As specified as in Annexure 3
- c. Members shall manage Last mile leased lines and routers and SLA.

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Salient features of aforesaid service models:

| Service Feature | Managed Service Model | Self Service Model |
|-------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|--------------------|
| Choice of last mile router can be made by member | X | √ |
| Last mile leased line life cycle can be managed by member | X | √ |
| Last mile reliability solution, monitoring and ensuring SLA for their uptime can be managed by member | X | √ |
| Last mile leased line life cycle management by TNI (Activation till Surrender) | √ | X |
| TNI co-ordination with TELCO service providers for last mile leased lines (Delivery, SLA, incidents, changes etc.) | √ | X |
| Last mile leased line monitoring & management by TNI | √ | X |
| Last mile router supply, installation, configuration & testing by TNI | √ | X |
| Last mile router monitoring & management by TNI | √ | X |
| Last mile router troubleshooting & replacement (as per OEM SLA) by TNI to restore connectivity. *OEM - Original Equipment Manufacturer | √ | X |
| Onsite field support by TNI for last mile leased lines & routers | √ | X |
| TNI Help Desk support | √ | X |
| TNI Network Operations Centre (NOC) services | √ | X |
| TNI ticketing system & update services | √ | X |
| TNI managed services portal/dashboard | √ | X |

NOTE:

- Members may note that lines procured under a particular mode of service shall not be available for conversion to the other type of service model. In case members desires to switch mode of service, lines under existing mode of service will have to be surrendered and reapplied under the desired service model, leading to change of IP address.
- Member must make sure at least one router per connectivity scenario is maintained.
- Member needs to send a duly filled, signed & stamped Purchase order (PO) to Sify Technologies Ltd. on the email id <onsite_nse@sifycorp.com>.
- Sify Digital Services Ltd ('SDSL') is a wholly owned subsidiary of SIFY Technologies Ltd and will continue to provide member router hardware & managed services. Accordingly, the existing Managed Services / Router billing & payment, Router hardware & AMC etc. will be managed by SDSL effective from 01-January-2024**
- The sale/manufacturing of router model Cisco ISR 4321 has been discontinued by Cisco from 07-Nov-2023 but warranty/support/AMC for existing routers would be active till 30-Nov-2028.
- In case trading members already have the existing router model Cisco ISR 4321 router in stock which was earlier procured from SDSL, under managed service model and covered under SDSL/AMC/Warranty, the same can be used for the new connectivity; hence procurement of new router shall not be mandatory for new connectivity request under managed service model.
- Trading members desirous of procuring a router from SDSL for new managed service connectivity or redundancy in existing scenario/ link shall have to provide a PO to SDSL directly.

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- h. Member applying for leased line connectivity under Managed Service mode can request for the router, by raising requisite Purchase order (PO) to 'TNI' directly, as per the Annexure 4 for Router model C8200 and as per the Annexure 5 for Router model C8300. In the purchase order, the delivery address must be same where the scenario/link is operational. Lead time for router delivery shall be 8 weeks post receipt of complete PO by Sify from member.
- i. In case members already have the NSE specified router in stock; earlier procured from Sify, under managed service model and covered under Sify AMC/Warranty, the same can be used for the new connectivity; hence procurement of new router shall not be mandatory for new connectivity request under managed service model.
- j. Members desirous of procuring additional router on existing scenario shall have to provide the Purchase Order to SIFY Digital Service Limited directly.
- k. In the purchase order, the router delivery address (member Location) must be same where the Leased line connectivity is applied.
- l. Members are requested to additionally note the following:
 - All activities related to the POP network, last mile connectivity etc. shall fall under the purview of TNI including service, support, troubleshooting and other such ancillary activities. However, Members can continue to apply for various connectivity-based requests via ENIT. The requests shall be routed to TNI for further processing.
 - The TNI shall facilitate the delivery of scenario/ link from the telecom service providers to the trading members. The delivery shall be subject to the feasibility of scenario/ link with the telecom service providers.
- m. For selection of router model under various Scenario-Bandwidth combination, refer below table.

| Router Model | 50 Mbps | | | 100 Mbps-200 Mbps | | | 300 Mbps | | |
|---------------|-----------------|---------------|------|-------------------|---------------|------|-----------------|---------------|------|
| | Single Scenario | Dual Scenario | | Single Scenario | Dual Scenario | | Single Scenario | Dual Scenario | |
| | SRSL | SRDL | DRDL | SRSL | SRDL | DRDL | SRSL | SRDL | DRDL |
| ISR 4321 | ✓ | ☒ | ✓ | ☒ | ☒ | ☒ | ☒ | ☒ | ☒ |
| C8200-L | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ☒ | ✓ |
| C8300-1N1S-6T | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

Abbreviations of Scenario
 SRSL – Single Router Single Link
 SRDL - Single Router Dual Link
 DRDL – Dual Link Dual Router

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II. Connectivity application process:

A. Various Connectivity Scenarios at NSE:

Trading Members are required to choose a scenario from the available categories to apply for connectivity.

| Connectivity options at NSE | | | | | | | | | | | |
|---------------------------------|--------------------|----------------------------------------------------|-----|-----|-----|------|------|------|-------|----|-----|
| Category | | A | B | C | D | E | F | G | H | O* | S** |
| Interactive messages per second | | 40 | 100 | 200 | 400 | 1000 | 2000 | 5000 | 10000 | NA | NA |
| No. of user ids | | 50 User IDs per box for each segment | | | | | | | | NA | NA |
| Bandwidth options | | 4 / 10 / 20 / 30 / 50 / 100 / 150 / 200 / 300 Mbps | | | | | | | | | |
| Market Data Broadcast | | Yes (Only data – 5 deep 1 second frequency) | | | | | | | | | NA |
| Types of Scenarios | Single Leased Line | A2 | B1 | C1 | D1 | E1 | F1 | G1 | H1 | O1 | S1 |
| | Dual Leased Lines | A4 | B2 | C2 | D2 | E2 | F2 | G2 | H2 | O2 | S2 |

*O – Separate connectivity for market data broadcast.

**S - Members can access Connect2NSE platform using dedicated leased lines (category 'S'). The Exchange currently provides the members access to the following facilities through the Connect2NSE platform (homepage - <http://www.connect2nse.com/>):

- NOTIS: Online trade details.
- EXTRANET: 24 X 7 file-based interface and other such ancillary services as provided through C2N portal.

Members may refer to Annexure 6 - Application Form for accessing Connect2NSE platform for the application format to utilize existing Leased line used for trading to access Connect2NSE platform.

NOTE:

- Members are recommended to manage their bandwidth capacities and utilization appropriately to receive broadcast after considering their bandwidth utilization.
- Based on the scenario i.e. message category subscribed, members can subscribe to all messages in single segment or Box id or distribute the same across segment or child IP's as per their business requirement
- Members are advised to plan their interactive and broadcast configuration in such a way that at any point of time the bandwidth utilization is not more than 70% of the bandwidth capacity opted by the member.

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4. The Exchange shall not be liable in any manner whatsoever including but not limited to any disconnection, excess bandwidth utilization, related latency issues, etc. which arises out of member's decisions on broadcast configuration amongst the various options available to members.
5. Members are requested to refer section IV of this circular to avail Multicast Tick by Tick Data (MTBT) over WAN network.
6. Exchange shall introduce new category "I" with 120 messages per second per IP with Annual Recovery Charges of Rs 2000 + taxes as applicable and only access to commodity segment shall be available on this category. As communicated in circular ref no. NSE/MSD/61390 dated March 31, 2024, Exchange will issue a separate circular detailing implementation guidelines and effective date for submitting request in ENIT via existing modules for new category.

B. Documentation and processing fees:

- a. Existing members can opt for availing additional leased line connectivity by submission of request for connectivity through ENIT portal. Additionally, they shall be required to provide Purchase Order ('PO') to TNI for each connectivity-based activity/requests. (Path: ENIT-NEW-TRADE > TCP IP Scenario > Activation).

Types of offices for connectivity installation:

- i. Branch office of trading member
- ii. Corporate office of trading member
- iii. Registered office of trading member
- iv. **Authorised person's office of trading member**
- v. Third party data centre in India

- b. New / Prospective Members not having access to ENIT interface are required to submit below physical documents to the Exchange for availing leased line connectivity for any service model:

- i. Application form.

Format for the same is available as Annexure 7 - Application form for new leased line connectivity (Member may also download document uploaded on website from the path: Trade > Platforms & Services > Connectivity & User Id > Application formats.

Website Link: <https://www.nseindia.com/trade/platform-services-application-formats>)

- ii. Board resolution mentioning the authorized signatories, along with the specimen signature of the signatories.

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c. Application processing fees:

| APPLICATION PROCESSING FEES COLLECTED BY THE EXCHANGE (LEASED LINE) | | | |
|---------------------------------------------------------------------|---------------------------------|-------------------------------|-------------------------------|
| Sr. No. | ACTIVITY | ACTIVATION | SHIFTING/ SURRENDER/ |
| | | | CANCELLATION |
| 1 | Single Scenario | ₹ 2,000 + Taxes as applicable | ₹ 1,000 + Taxes as applicable |
| | (A2,B1,C1,D1,E1,F1,G1,H1,O1,S1) | | |
| 2 | Dual Scenario | ₹ 4,000 + Taxes as applicable | ₹ 2,000 + Taxes as applicable |
| | (A4,B2,C2,D2,E2,F2,G2,H2,O2,S2) | | |

Charges payable at par

NOTE:

- For applications submitted by existing members through ENIT, the processing fees are collected from **member's Exchange dues account**.
- For new / prospective members, the processing fee can be paid through NEFT for which the Beneficiary account details are below:
 - Beneficiary Name - NATIONAL STOCK EXCHANGE OF INDIA LIMITED
 - Name of the Bank - HDFC BANK LIMITED
 - Name of the Branch - FORT, MUMBAI
 - Nature of Account -CURRENT
 - Account number – 00990610000064
 - IFSC Code of the Bank/Branch - HDFC0000060

New Members/Provisional members desirous of availing leased line connectivity through the Exchange are required to submit the above application set along with processing fees transaction details (UTR number) on email id msm@nse.co.in .

Similarly new members/provisional members desirous of surrendering their leased line connectivity, are required to submit the surrender application form as per Annexure 13 along with processing fees transaction details (UTR number) on email id msm@nse.co.in .

*For detailed information on how to apply for connectivity of third-party data centre, members are requested to refer section III of this circular.

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C. Leased Line connectivity costing:

| LEASED LINE CONNECTIVITY COST (IN ₹) | | |
|---------------------------------------------|--------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A) | Message Rate Category | LEASED LINE ANNUAL RECOVERY CHARGES (NSE) + TAXES AS APPLICABLE |
| 1 | Category A (40 m.p.s) | 50000 |
| 2 | Category B (100 m.p.s) | 250000 |
| 3 | Category C (200 m.p.s) | 500000 |
| 4 | Category D (400 m.p.s) | 1000000 |
| 5 | Category E (1000 m.p.s) | 2500000 |
| 6 | Category F (2000 m.p.s) | 5000000 |
| 7 | Category G (5000 m.p.s) | 12500000 |
| 8 | Category H (10000 m.p.s) | 25000000 |
| 9 | Category O | Nil |
| 10 | Category S | 50000 |
| B) | ANNUAL RECOVERY CHARGES (SERVICE PROVIDER) | As per Service Provider Rate Chart. Members may refer to Annexure 8 and Annexure 9 Service provider rates chart. |
| C) | OTC CHARGES/INSTALLATION CHARGES | Note: Currently Exchange provides 4/10/20/30 / 50 / 100 / 150 / 200 / 300 Mbps as bandwidth options. 6 and 8 Mbps options have been discontinued vide circular NSE/MSD/42272. |

NOTE:

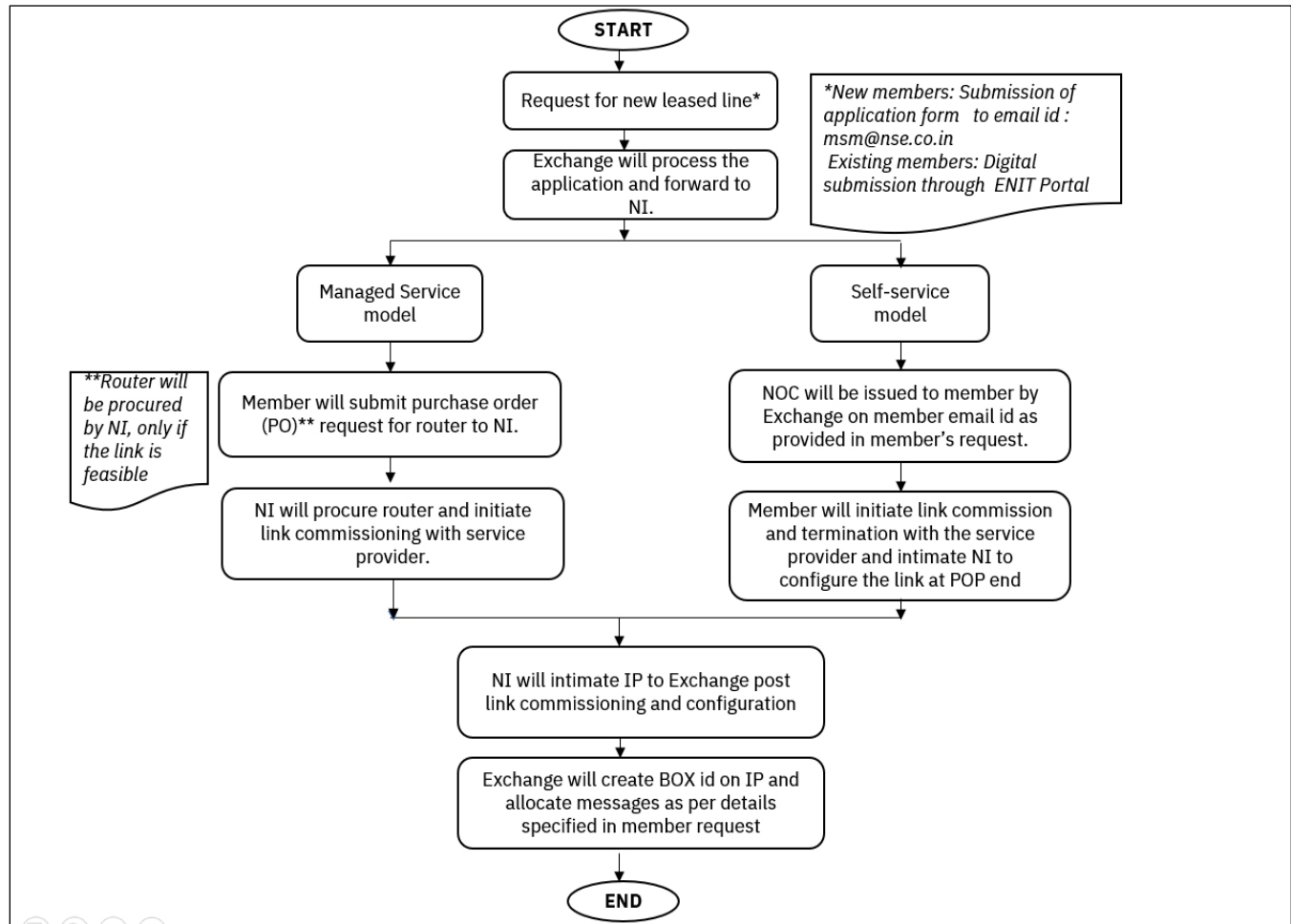
- The Message Rate Charges towards interactive message category scenarios and applicable processing fees shall be levied to members by the Exchange.
- The Exchange facilitates collection of all the relevant charges through Member's Exchange Dues Account as per billing policy by F&A/Commercial department updated from time to time for existing members.
- The regulation and management of telecom service providers and their rate card towards members last mile connectivity, shall be handled by TNI.
- Members/participants shall be required to pay the last mile connectivity charges, annual recovery charges (service provider), router charges, one-time charges, installation charges, port charges etc. directly to the TNI.

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- e. Existing telecom service providers last mile billing & payment shall be managed by the TNI as mentioned below:
 - a. Airtel, TCL – Effective from 01-Jan-2024
 - b. MTNL, BSNL- Effective from 01-Apr 2024
- f. New members not having exchange dues accounts are required to pay relevant charges via NEFT to exchange account.
- g. For all the NSE billing related queries related to leased line message rate charges or processing fees, member may get in touch with finance and accounts team of the Exchange by emailing at dl-fa-mem@nse.co.in
- h. An additional Annual Recovery charges i.e. Message charges of Rs. 2000 + applicable taxes shall be levied by the Exchange for members with connectivity scenarios activated for Commodity Derivatives segment.
- i. The aforesaid charges shall be applicable at the scenario level in addition to charges levied for the base category scenario i.e. A to H levied by the Exchange.
- j. The additional charges shall be applicable only for scenarios activated for Commodity segment.
- k. The charges shall be applicable at scenario level and for each parent IP member can continue to apply for additional 9 child IP on the connectivity scenario with 120 messages per second per IP subscribed in Commodity Segment.
- l. Exchange currently has a POP at Mumbai BKC location which provides access only to Commodity Segment. Members subscribing to links at the said POP shall be levied Annual Recovery charges i.e. Message charges of Rs. 2000 + applicable taxes only. The charges for base category of scenario i.e. A to H shall not be applicable for such links.
- m. All members are offered 2 category A Leased Lines (Managed/Self Service) with zero Annual Recovery Charges i.e., ARC (NSE).
- n. If at any point of time after the commencement of these charges, the category of an eligible Zero ARC Connectivity is changed by the member, the NIL ARC provision shall be considered as forfeited and, on such Connectivity, no further rebate shall be available.
- o. The rebates offered shall be at per connectivity basis and not on the total message subscription of a member. For e.g., a member not having any category A connectivity shall not be eligible for any rebate.
- p. The Exchange reserves the right to modify the operational modalities of the above rebates at any point of time to ensure efficient management, accounting, and billing to members.
- q. Interest Free Security Deposits (IFSD) is not applicable for leased line and connectivity being offered under Exchange connectivity options.
- r. Members are requested to refer circular issued from time to time for any changes in fees / charges of Last mile connectivity (both wired and wireless)/Port charges as stated above for leased lines connectivity. For convenience the details are updated under **below path on website for member's ready reference**: Trade>Platforms & Services>Connectivity & User Id>Connectivity Costing (Non-Colo)

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D. Process flow for both leased line service models:



- The Leased Line connectivity applied by the member and the resultant IP provided by the Exchange once the link is commissioned is known as “Mother IP”.
- Members can apply up to 9 child IPs under a given Mother IP. Members can place request for child IP activation/ surrender through ENIT via below modules:
 - NEW ENIT> Membership>TCP IP Scenario>Activation.
 - NEW ENIT> Membership>TCP IP Scenario>Surrender.
- 1 message rate and 50 users will be allotted upon box creation for the Child IP in all segments except Commodity derivatives (CO). Default message rate in CO segment is 120 messages and 50 users.
- Subsequently, members can change the message bifurcation across segments according to the scenario selected through ENIT path-NEW ENIT>Trade>User ID Request>Message/User rate change.
- For CM, FO and CD segments; member will be required to bifurcate the message rate across IPs (mother & child) and segments so that the total message rate does not exceed the total allotted capacity as per the scenario selected by the member.

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III. Connectivity at third party data Centre:

Members can host Trading/ Internet/ Non-Neat Frontend servers at Third Party Data Centre / Service Provider Site in lines with Branch office / Corporate office / Registered office /Authorised Person's office. The members desirous of using this facility may apply through ENIT.

Members are required to submit the following document in addition to the Connectivity application format to the Exchange:

1. Undertaking cum indemnity for hosting servers at Data centre.

Document applicability as per instances:

| SR. NO. | INSTANCE | DOCUMENT REQUIRED |
|---------|---------------------------------------------------------------------------------------|-----------------------------------|
| 1 | Member applying for 1st connectivity on third party data centre. | An Undertaking from the member. |
| 2 | Member applying for additional connectivity on same third-party data centre location. | No additional documents required. |
| 3 | Member applying for additional connectivity on any other/New third-party data centre. | No additional documents required. |

Members are requested to refer to Annexure 10 - Application formats for applying connectivity at third party data centre for formats of the aforesaid documents.

Process:

1. Member shall email scan copies of above-mentioned documents as applicable to msm@nse.co.in
2. Post confirmation from the Exchange regarding completeness and correctness of the documentation, member shall place request on ENIT portal. (Path: ENIT-NEW-TRADE>TCP IP Scenario>Activation Select office type as "Third party data centre")
3. Once confirmed, members are required to send the hardcopy of the Undertaking to below mentioned address of the Exchange:

Member Service Department,
National Stock Exchange of India Ltd
Exchange Plaza, Bandra-Kurla Complex
Bandra (East)
Mumbai – 400051

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4. Requests will be processed on receipt of originals at the concerned department. For requests, where original documents are not received within 5 days from the date of submission of request on ENIT portal, application will be rejected on ENIT portal and member will have to resubmit the request on ENIT portal.
5. Rest of the process for obtaining IP remains the same as explained in process flow chart in section II.D

IV. Multicast Tick-by-Tick data (TBT) feed on WAN:

a. Multicast Tick by Tick (MTBT) data subscription:

NSE MTBT (Multi cast Tick-by-Tick) data feed offered by the Exchange provides a detailed view of the entire order-book, which includes details relating to addition, modification and cancellation of orders and trades on a real-time basis. A revised scheme of 'T' category line was implemented by the Exchange to facilitate dissemination of MTBT data to members.

b. Procedure for availing connectivity for MTBT:

Members who seek to avail MTBT data can place requests for the 'T' category service by applying to the Exchange in the format specified as per Annexure 11 - Application formats for availing connectivity of MTBT.

For availing this facility members are advised to ensure the following:

1. Member should be registered in applicable segment.
2. Members shall be responsible for procuring the requisite lease line/s from telecom service providers enlisted by the Exchange for providing MTBT connectivity. The list of such connectivity service providers is as under:
 - a. Tata Teleservices Maharashtra Ltd.
 - b. Tata Communication Ltd.
 - c. Bharti Airtel.
 - d. Tikona Infinet Private Ltd.
 - e. Microscan Infocommtech Private Ltd.
 - f. Sify Technologies Limited
3. Per member only two physical lines shall be permitted except Commodity Derivatives segment.
4. Members can avail any number of physical links as per their business requirement for subscribing Multicast Tick By Tick (MTBT) data in the Commodity Segment.
5. IP shall be provided to each of these links. Members shall be responsible to create redundancy on their own at their end.
6. Minimum bandwidth of the link for all segments except Commodity Derivatives segment shall be 1.5 Gbps.
7. Bandwidth of the link for Commodity Derivatives segment shall be between 4 to 300 Mbps.
8. **It shall be the member's responsibility to procure and maintain the connectivity required to take such data. The member shall be solely responsible for choosing the vendor, quality of line, bandwidth etc.**

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related to such connectivity. Any issues related to connectivity shall be the sole responsibility of the member.

9. Members shall be allowed to extend such MTBT connectivity in India at the following locations:
 - a. Members registered / dealing / branch office / Authorised Person.
 - b. Members owned/hired rack in a third-party data centre in India.
10. For recovery of MTBT data members are requested to refer circulars issued by the Exchange on Market Data Broadcast from time to time.
11. **Members, who wish to surrender their 'T' category service, need to submit request to the Exchange in the format specified in Annexure 11 - Application formats for availing connectivity of MTBT.**
12. **Minimum Technical Specifications required for member's routers for their 'T' category service are mentioned as below:**
 - a. Should support Dynamic routing protocols like BGP/OSPF
 - b. Should support multicast routing (PIM sparse mode)
 - c. Should support WAN links.
13. Members may kindly note that there shall be no charges levied by the Exchange for availing MTBT data.
14. With respect to using the Exchange data, members may kindly take note of the Exchange circular **NSE/MEM/26958 dated June 19, 2014. The Exchange data can be used by member's clients who are registered for trading with the member on the Exchange in any segment.**

V. Access to NSE-EBP Platform:

NSE-EBP (electronic bidding platform) is a web-based platform provided by the Exchange for issuance of debt securities on private placement basis through an Electronic Book Mechanism.

The Exchange in its continuous endeavour to provide better services introduced a facility for accessing NSE - EBP platform through POP based Leased Lines (LL) connectivity. As per the said facility participants can take leased line connectivity at their Main/ Branch/ Registered/ Corporate Offices and Third-Party data centres.

Modalities with respect to the same are cited as under:

A. Existing Members having POP connectivity.

1. Members having leased line connectivity with the Exchange via POP network for participating in other segments/products of the Exchange can access NSE-EBP through such links.

Access Details: URL *: <https://172.19.125.85>, Port: 443

*Note:

Exception Error- Since the application would be accessed using the above URL instead of the domain name, the browser would give security exception. The user should ignore the exception and continue browsing the application.

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2. The charges as applicable to normal leased lines as communicated by the Exchange from time to time shall continue to be applicable. However, there shall be no extra charge for using such links for participating in NSE-EBP. The Exchange reserves the right to levy charges, if any, in future after giving due notice in this regard.

B. NSE-EBP exclusive connectivity for registered participants.

1. NSE-EBP registered participants who are not members of the Exchange can procure Leased Lines under self-service mode to connect only to NSE-EBP. Access details are as specified above in point no A. 1.
2. NSE-EBP participants desirous of procuring such exclusive usage leased lines shall make an appropriate request to the Exchange at msm@nse.co.in via application form (signed and scanned copy) as prescribed in Annexure 12.
3. After verification, Exchange shall issue an NOC for termination of such link(s) at the POP. The applicant/applicants chosen vendor shall be required to coordinate with the Exchanges' Telcom Network Integrator (TNI) for commissioning of such links. Aforesaid NOC will have to be submitted to NI for commissioning of such links. NI will inform the IP allotted against such request to the applicant for required configuration at their end.
4. Participants would be responsible to ensure that such connectivity is used for only accessing NSE-EBP.
5. Activities such as leased line shifting, bandwidth change etc. shall not be applicable for these links.
6. All modalities/terms/conditions applicable to connectivity, especially self-service mode shall be applicable to such links also.
7. Participants shall abide by all procedural formalities/requirements/compliances with respect to connectivity as prescribed by the Exchange from time to time.
8. Members can refer available list of POPs for accessing connectivity to EBP in Annexure 2 - LIST OF POPs for accessing connectivity to EBP. POP addresses and existing service providers are subject to change and termination with prior notification. In the event of such changes and/or termination participants shall have to abide by the notifications/directions of the Exchange from time to time.

Currently the Exchange shall not levy any application processing fees and/or usage charges on such facility. However, the Exchange reserves the right to levy such charges in future after giving due notice in this regard.

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VI. Various types of connectivity-based service requests offered by the Exchange:

Trading members can place connectivity related requests electronically through the interface provided by the Exchange i.e. ENIT (<https://enit.nseindia.com/MemberPortal/>) under path:

ENIT-NEW-TRADE>MEMBERSHIP>TCP IP SCENARIO

a. Types of requests: Existing members can place below requests through ENIT:

| Sr. No. | Type of request | Particulars |
|---------|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Activation | New scenario activation: Request for installation of new leased line connectivity at locations permitted under trading member by the Exchange. |
| 2 | Activation of Child IP | Members can apply for up to 9 child IPs under a given Mother IP. |
| 3 | Shifting | Shifting is requested for shifting of leased line from one location to another location within same city. |
| 4 | Merge | Scenario merge is requested for combining or merging of two different single scenarios located at same address, into one dual scenario. While merging two single scenarios, member can retain IP of any one scenario of their choice. |
| 5 | Demerge | Demerging is requested for splitting of a dual scenario into two different single scenarios. On successful processing of scenario demerge requested one additional IP is assigned. This is applicable to both Managed Service Model and Self-Service model. |
| 6 | Category change | Category change is requested for changing Message Rate Category (Upgrading/Downgrading) of existing scenario. |
| 7 | Change in bandwidth | Change in Bandwidth is requested for changing bandwidth (Upgrading/Downgrading) of existing scenario. |
| 8 | Cancellation | Cancellation is requested for cancellation of Activation/Shifting/Merge-Demerge/Category change/Change in bandwidth requests pending at the Exchange end. |
| 9 | Surrender | Surrender is requested for surrender of commissioned Leased line connectivity. |

b. Important notes to be considered while placing connectivity-related service requests:

While placing connectivity requests members are advised to adhere to the following:

- Members can submit new request for any type; only if no other connectivity request is pending for the specified IP.
- Members applying for additional connectivity at same premises are advised to select address type as “Existing Address” in while applying for connectivity in ENIT.

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3. Members to ensure that STD code and PINCODE are entered correctly for the given POP and address selected. If office type selected is data centre, members must ensure that complete data centre name is specified in the address field and complete address of the data centre is specified in ENIT request.
4. Shifting requests can be processed only for shifting within the same city.
5. Request for merger and demerger is accepted upon having met following conditions:
 - a. Both merging connectivity shall have:
 - i. Same bandwidth.
 - ii. Same scenario.
 - iii. Present at same location.
 - b. Merging and demerging connectivity shall not have any pending connectivity requests on the same including those of request for child IPs.
 - c. For demerging activity (of managed service links), member shall ensure availability of router, procured from SIFY and have been covered under warranty/AMC with SIFY (earlier procured under managed service mode or new procurement)
 - d. Members need to ensure that active user ids on the non-retained IP are shifted or disabled before placing the merger request. The request for shifted or disablement can be placed via ENIT on the following path:
 - Trade>User ID request>Shifting of Neat User ID
 - Trade>User ID request>Disable Neat User ID
 - e. Members need to ensure that no user ids are multi locked on the non-retained IP before placing the merge request. The request for removal of multi lock of user ids can be placed via ENIT on the following path:
Trade>User ID request>Multiple lock Neat User ID
6. Similarly for Surrender requests members need to ensure:
 - i. Active user ids on the mentioned IP are disabled or shifted before placing surrender request.
 - ii. No user ids should be multi-locked on the IP which is to be surrendered.
7. Requests submitted on or before 3:00 p.m. on a given working day shall be processed on best effort basis latest by T+2 working days.
8. For data centre activation, requests will be processed on receipt of originals at the concerned department. For requests, where original documents are not received within 5 days from the date of submission of request on ENIT portal, application will be rejected on ENIT portal and member will have to resubmit the request on ENIT portal.
9. Members are advised to note that, processing of activation/shifting/bandwidth upgradation, etc. is **dependent on technical feasibility at telecom service provider's end.**
10. Members who are still having 6 and 8 Mbps leased line connectivity are requested to apply for scenario bandwidth change request under option 4/10/20/30/50/100/150/200/300 Mbps.
11. The common reasons for rejection of the aforementioned connectivity requests are outlined in Annexure 14.
12. In event of any further queries related to connectivity, please contact on 1800 266 0050 (Option 1)/ msm@nse.co.in

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VII. Redundancy Options available to members in terms of connectivity:

The Securities Market is heavily dependent on IT and IT infrastructure. In the International markets, to ensure business continuity, generally, market participants have created and maintained a business continuity plan which broadly includes identifying procedures relating to an emergency or significant business disruption that are designed to enable the member to meet its existing obligations to customers. Normally, at a broad level, the BCP/DR plan addresses areas like Data back-up and recovery (hard copy and electronic); mission critical systems, Financial and operational assessments, alternate communications between the member, its customers and employees, alternate back-up site from where business operations could resume and function, customer protective measures assuring prompt access to their funds and securities in the event that the member determines that it is unable to continue its business etc.

Breakdowns of IT and IT infrastructure could occur from major disasters such as Earthquakes, floods, fires, riots, or war etc., which could lead to interruptions to business functions. In the past, there have been a couple of occurrences of such disasters in India due to which it is very essential that members should establish a well-defined Business Continuity/DR plan.

Also, given the current technology intensive environment in which Indian Securities market operates, to ensure stability in operations of Members so that interest of investors and market at large is not adversely impacted, members are advised to sufficiently review all potential risks along with its impact on the business and put in place BCP/DR plan.

The Exchange is cognizant of the importance of redundancy to ensure continuity of services. To this aim, the Exchange provides enough redundancy options to members for connectivity, enabling them to create network resiliencies. The Exchange, on multiple occasions, has communicated to members vide occasional circulars, the importance of having resilient connectivity systems to ensure continuity of services to their clients. Accordingly, Members are advised to deploy one or more of the below mentioned redundancy options to ensure continuity of their business operations as per their requirements.

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| Feature Name | Applicability |
|----------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Multiple Dual Connectivity Options available | <p>Members can create connectivity redundancy by the following means:</p> <ul style="list-style-type: none"> • Opting for new dual scenario connectivity like A4, B2, C2, D2, E2, F2, G2, H2, S2, O2 etc. (Only one IP will be allotted for a scenario) OR • Merging of existing 2 single scenario connectivity e.g. A2 & A2 can be merged to create A4 scenario i.e., Dual Leased Line scenario. <p>Path for placing request via ENIT:</p> <ul style="list-style-type: none"> • For New Scenarios: ENIT > Membership > TCP IP scenario > Activation • For Merging existing scenarios: ENIT > Membership > TCP IP scenario > Merge |
| Point of Presence (POP) Redundancy | <p>The Telecom Network Integrator provides Leased Lines through Multiple POP Location set up by the Exchange. Accordingly, members can create redundancy at POP level by following means:</p> <ul style="list-style-type: none"> • By taking additional connectivity scenario from a different POP location • Opting for 2 different POPs for Dual connectivity scenario's like A4, B2, C2, D2, E2, F2, G2, H2, S2, O2 etc. <p>In scenarios activation form, members are provided options to select different POPs in the 'POP' field.</p> |
| Telecom Service providers | <p>The Telecom Network Integrator provides Leased Lines through Multiple telecom service providers.</p> <p>Accordingly, members can create redundancy at service provider level by following means:</p> <ul style="list-style-type: none"> • By taking additional connectivity scenario from a different Service provider • Opting for 2 different Service providers for Dual connectivity scenarios like A4, B2, C2, D2, E2, F2, G2, H2, S2, O2 etc. <p>In scenarios activation form, members are provided options to select different service providers in the Service providers' field.</p> |
| Hardware i.e., Routers | <p>The Telecom Network Integrator enables redundancy at router level for dual link scenarios. Members can choose to connect using single router / dual routers for creating router level redundancy. For dual link scenarios, members need to connect with TNI to implement the same.</p> |

- Members are advised to have alternate modes of connectivity.
- It is recommended that members are required to avail connectivity from two different service providers for redundancy.
- Link feasibility at member's location is at the discretion of the service provider chosen by the member.

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- Link latency may vary depending upon service provider, geographical location, end-to-end path, media, distance, type of connectivity, etc.
- Upon surrendering the link, member must return all applicable equipment owned by the telecom service provider post which commercials shall be settled by telecom service provider / telecom network integrator against surrendered link.

VIII. List of important circulars issued by the Exchange related to connectivity.

Members are requested to refer to the Exchange circulars issued and updated from time to time for detailed information on the subject. A non-comprehensive list of important circulars is shared below:

| Date | Subject | Circular No. |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|
| April 28, 2025 | Multicast Tick By Tick (MTBT) data in Commodity Segment | NSE/MSD/67708 |
| February 28, 2025 | Multicast Tick By Tick (MTBT) data in Commodity Segment | NSE/MSD/66887 |
| January 16, 2025 | Connectivity-Digital acceptance of requests pertaining to revised Bandwidth options. | NSE/MSD/66157 |
| November 06, 2024 | Connectivity - Revision in Bandwidth options. | NSE/MSD/64930 |
| October 25, 2024 | Change in POP address | NSE/MSD/64745 |
| August 23, 2024 | Connectivity - Change in maximum permissible message rate capacity per box per segment. | NSE/MSD/63538 |
| April 30, 2024 | Connectivity- Consolidated Circular | NSE/MSD/61837 |
| March 31, 2024 | Applicability of fees/ charges pertaining to Commodity Derivatives Segment | NSE/MSD/61390 |
| March 13, 2024 | Member telecom network support by Telecom Network Integrator ('TNI') - Sify Technologies | NSE/MSD/61119 |
| November 23, 2023 | Connectivity - Digital acceptance of request for category F, G and H | NSE/MSD/59495 |
| August 02, 2023 | Optimisation of Exchange connectivity options - Introduction of category F, G and H | NSE/MSD/57802 |
| June 09, 2023 | Digital submission of TCP IP based requests for service providers, M/s - Tikona Infinet Private Limited and M/s - Microscan Infocommtech Private Limited | NSE/MSD/57036 |
| June 05, 2023 | Introduction of M/s - Tikona Infinet Private Limited and M/s - Microscan Infocommtech Private Limited as a Leased line connectivity telecom service provider. | NSE/MSD/56964 |
| November 04, 2022 | Change in POP Address | NSE/MSD/54307 |
| October 14, 2021 | Connectivity – Introduction of dual link scenario in Self Service mode (zip) | NSE/MSD/49949 |
| July 15, 2021 | Connectivity - Addition of POPs | NSE/MSD/48924 |

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|--------------------|--------------------------------------------------------------------------------|---------------|
| November 09, 2020 | Connectivity- Access to NSE – EBP platform. | NSE/MSD/46303 |
| October 14, 2020 | Connectivity – Advisory | NSE/MSD/46025 |
| September 15, 2020 | Interactive Connectivity Parameters - Consolidated Circular | NSE/MSD/45703 |
| July 28, 2020 | Connectivity – List of POPs | NSE/MSD/45153 |
| July 14, 2020 | Connectivity - Access to NSE-EBP platform | NSE/MSD/45014 |
| June 22, 2020 | Connectivity – Revision in Annual Recovery Charges for messages | NSE/MSD/44718 |
| June 15, 2020 | Multicast Tick by Tick (MTBT) data in Commodity Segment | NSE/MSD/44650 |
| December 02, 2019 | Connectivity - Digital acceptance of request for category E and O | NSE/MSD/42801 |
| November 08, 2019 | Connectivity - Revised bandwidth options | NSE/MSD/42626 |
| October 07, 2019 | Connectivity - Rate chart for wireless | NSE/MSD/42315 |
| August 30, 2019 | Connectivity - Introduction of category "E" and "O" (pdf) | NSE/MSD/42014 |
| August 29, 2019 | Connectivity - Merge and Demerge requests for POP connectivity (zip) | NSE/MSD/41993 |
| March 20, 2019 | Connectivity - POP network changes - Surrender of Leased line (pdf) | NSE/MSD/40487 |
| January 31, 2019 | Connectivity - POP network changes (zip) | NSE/MSD/40093 |
| January 22, 2019 | Interactive Connectivity Parameters - Consolidated Circular | NSE/MSD/40008 |
| November 27, 2018 | POP network changes - Commissioning date for billing | NSE/MSD/39490 |
| November 09, 2018 | POP network changes - Guide on Sify services (zip) | NSE/MSD/39377 |
| August 30, 2018 | New ENIT - Connectivity modules (pdf) | NSE/MSD/38740 |
| June 29, 2018 | POP network changes - Process for procurement of new Leased Lines (LL) (zip) | NSE/MSD/38195 |
| June 29, 2018 | Multicast Tick by Tick (MTBT) data subscription (zip) | NSE/MSD/38190 |
| May 23, 2018 | POP network changes - Service Mode selection (zip) | NSE/MSD/37818 |
| April 19, 2018 | Discontinuation of A3 & A5 scenario | NSE/MSD/37567 |
| October 05, 2017 | Discontinuation of Advance collection of service charges (pdf) | NSE/MSD/36031 |
| August 31, 2016 | Leased Line Connectivity - Consolidation of POPs | NSE/MEM/33115 |
| November 09, 2015 | Higher Bandwidth Leased Lines (4, 6, 8, 10 & 20 Mbps) (zip) | NSE/MEM/31097 |
| July 24, 2014 | Introduction of Dual Router facility for A4, B2, C2, S2 and T2 scenarios (zip) | NSE/MEM/27210 |

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| | | |
|--------------------|-------------------------------------------------------------------------------------------------------------|----------------|
| September 14, 2012 | Acceptance of connectivity application for Merge, Demerge, Change in Scenario and Cancellation through ENIT | NSE/MEM/21713 |
| July 18, 2012 | Introduction of Multiprotocol Label Switching (MPLS) based connectivity for trading purpose | NSE/MEM/21297 |
| December 03, 2009 | IP Connectivity for Category T (Tick by Tick) | NSE/memb/13599 |
| November 25, 2009 | IP Connectivity for Category C (200 Messages/per second) | NSE/MEMB/13539 |
| December 31, 2008 | Business Continuity Planning (BCP)/Disaster Recovery (DR) (htm) | NSE/MEMB/11832 |
| July 25, 2008 | Application forms for connectivity on TCP/IP Technology | NSE/memb/11042 |
| June 13, 2008 | Migration from X.25 protocol to TCP/IP | NSE/memb/10833 |
| February 28, 2008 | Connectivity at Third Party Data Centre/Service Provider Location. (zip) | NSE/MEMB/10365 |

This consolidated circular is a compilation of relevant circulars issued which are operational as on date of this circular. Efforts have been made to suitably incorporate and update the applicable provisions of existing circulars as per above table.