



National Stock Exchange of India Limited

NSE Colocation Guidelines

Table of content

1. Objective..... Error! Bookmark not defined.

2. Process:4

Objective

To provide guidance to all participants of colocation to follow the NSE Colocation Datacenter processes.

1. Process

Greetings!!!

Welcome to NSE Colocation Datacenter!!!

New Full/Half rack has been allotted to you in NSE Colocation Datacenter. (Rack No.).

Colocation Datacenter has been made available to the participants since January 2010 and the participants have installed their IT Infrastructure at NSE Colocation Datacenter.

To facilitate Colocation Datacenter access to the participants certain guidelines are given below.

- Datacenter physical access to the participants and their authorized member/vendors will be any time of the day. – provided the work permit is received minimum 30 minutes before taking access.
- However below mentioned activities shall be allowed post market hours only.
 - New point to point(p2p) link termination for any participant from Meet me rooms (MMR) to their rack
 - Inter rack cabling
 - All PDU related activities
- In-case of single entity providing the support to multiple participant's in Colocation Datacenter, separate work permit will be required from each participant.
- All IT equipment's of the participant's should be installed in their respective allocated rack. Any excess or spare equipment have to be taken back by the member on same day, as the same cannot be stored in NSE premises.
- All IT equipment's installed in Colocation Rack should be branded and dual power supply only. In case a participant is installing single power supply equipment's in the rack Exchange will not be held responsible for any power outage.
- Proper cable dressing in the rack to be done to avoid blocking of air flow.
- Asset inventory of the equipment's installed in Colocation rack should be declared before going live through Colocation.
- Participants should do the insurance of their IT equipment's installed in Colocation Datacenter.
- Exchange will provide TAP IP address after which the members need to apply for User id via ENIT from the below mentioned path

Trading > User Id Request > New Neat User id

- To reduce the implementation time at Colocation Datacenter participants should install the Operating System, Patches, Application software, anti-virus software etc. at their premises itself and then shift the equipment's to Colocation Datacenter.
- All mail communication with the Colocation Support team should be done by an authorized person of the participant.
- Exchange would provide 40 IPs per Full Rack.
- Exchange would provide 20 IPs per Half Rack.
- Exchange has two Time Synchronization as a services in Colocation facility (NTP & PTP). Interested participants can use the same & SOP template will be shared on request. Participants at their discretion can use any of the Time Synchronization service as per their requirement.
- Exchange has started providing TBT feed on Multicast in F&O, CDS & CM. Members may also note that in colocation members need not request for MTBT activation on rack as the same shall be provided as default along with rack allotment.
- Exchange will provide connectivity on 10G set up only to help colocation participants get more benefit on front of latency and future Technology advancements.
- Exchange has made available access to daily simulated market environment (Live like environment) and Test Market from colocation facility.
- To facilitate small and medium sized members to avail colocation facility, the exchange has introduced a facility of Colocation as a Service. Kindly refer to the NSE Circular number MSD37707 for further details.
- Network performance parameters such as latency figures are published on periodic basis.
- Exchange has implemented robust access control and monitoring mechanism with appropriate policies
- The Co-location facility at the Exchange comes in 2 variants i.e. Standard 42U Full Rack with 6KVA power and half rack of 21U with 3.5KVA. Participant's availing the racks in colocation are required to monitor their power utilization in their respective racks and take steps to ensure that at no point of time they exceed the prescribed limits.

The breach in the aforesaid limits may lead to overheating of cables and / or damages to the panel and UPS which may in turn cause damage to the colocation facility in general.

In order to encourage participant's to strictly adhere to the power consumption limits, the following process has been made effective w.e.f. April 1, 2017:

- If your rack exceeds 90% or 100 % utilisation of the sanctioned power on any given day, an communication will be sent to the escalation matrix available with the Exchange advising you to take corrective steps to bring it within the sanctioned limit at the earliest. (Participant's will be provided an opportunity to verify the power readings and satisfy themselves in this regards).

- If you do not take corrective action and exceed the utilisation beyond the sanctioned limit, the following stage-wise action plan will be initiated:

Stage	Number of days non-compliance in a calendar month	Action
I	1	Email warning
II	3	Charges of Rs.10,000 per rack per day of violation in the calendar month toward fair usage charges for power
III	5	Charges as per stage 2 plus switching off power for 1 working day after providing 1 working day notice to provide time to participant to rectify the issues, if any

- NSE for any unavoidable circumstances (Level III/Level IV Disaster/Regulatory compliance) starts exchange operations from its DR site. In that case NSE's Colocation hosting services will not be available for participants. In such a scenario participant's need to ensure that appropriate business continuity plans and procedures are in place.

NSE will not be held responsible for the same.

- Level III / Level IV Disaster/Regulatory Scenario.
- Primary Data Center not available.
- Colocation Data Center not available.
- Primary and Colocation Data Center not available.
- Planned live sessions from DR site as per directives from regulators.

1. Please find the attached Asset Inventory template and Escalation Matrix.



Asset Inventory
Template.xls

Note:- Please find the work permit format attached with the mail.

- Work permit for authorized persons of the participant's (employee / vendors) visiting the Colocation facility shall be on participant's letterhead **duly stamped and signed by authorized signatory**.
- The participant shall include a scanned copy of authorized visitor's (member/Vendor) **photo identity card (Government issued)** whose originals are required to be carried by visitor's during visit.

- Kindly note that original Government issued photo identity card of only those provided in email will be considered for providing access.

Note

- Original photo identity card of only those provided in email will be considered for providing access
- Authorized persons of the participant's visiting the Colocation facility need not submit a copy of a valid identification proof as previously mandated.



Work Permit
Format.doc

- Please find the attached document of **Authority letter**. It is required to be submitted on company letter head with authorized signature & company stamp for documentation.



Vendor
Authorization.doc

Note: If the person is from vendor then he should fill the Vendor authority letter along with work permit for documentation.

Escalation Contact Details

Level	Name	Email	Direct Line	Board Line
1 st Level Contact	Colo Support	colosupport @nse.co.in	022-26598815 (6 Lines 24*7) 022-61124900 (6 Lines 24*7)	022-26598100 Ext 21200
2 nd Level Contact	Mr. Avadhut Gharat	nseit_gharat@vendor.nse.co.in	022-26598460 / 9765681417	022-26598100 Ext. 21027
	Mr. Himanshu Sharma	nseit_hsharma@vendor.nse.co.in	022-26598460 / 9820636030	022-26598100 Ext. 21025

Management Contact Details

Name	Email	Direct Line
Mr. Amit Hatakar	ahatakar@nse.co.in	022-26598100 Extn 21037

General Colocation Guidelines:**1. Access:**

Access to Colocation facilities will be granted as per below mentioned points.

- All colo participant's will have to submit work permit along with photo ID proofs of their vendors / employees visiting the colo datacenter
- If a telecom vendor is requesting access to colo datacenter on behalf of a colo participant's, the colo participant will have to send a work permit for them.
- If a telecom vendor is requesting access to colo datacenter for maintenance / upkeep of its own device, then the telecom vendor will have to send a work permit along with photo id proof.

2. Inter Rack Cabling:

Any participant with multiple racks requiring to do inter rack cabling, needs to observe the general guidelines and conditions as mentioned below:

- Prior intimation of 24-48 hours has to be given to colocation support team
- The participant will be responsible for any damage to any other cable belonging to NSE / any other participant and will be liable for action as deemed suitable by NSE team.
- The cabling has to be done with the cable inside a grey colour conduit plastic flexible pipe only.
- The participant will ensure that their vendors/employees do not leave the datacenter in an untidy manner and will keep back ladders used for cabling back to their place.
- Participants shall ensure that their vendor / employee follow proper path of cabling, over the cable trays and not in any hap hazard manner.

3. Rack Setup:

- NSE Shall provide a standard 42 U Full rack or a 21 U half rack as desired by the participant
- NSE shall provide UPS refined power and Air conditioning
- For Full rack the allotted power is 6 KVA
- For Half rack the allotted power is 3.5 KVA

- Rack users shall be permitted and also encouraged to install their own PDU as long as the same adhere to the minimum technical specification specified by the exchange from time to time.
- In case of power consumption exceeding 90%, the rack users shall receive information from Exchange via emails using the escalation matrix available with the exchange
- On exceeding 100% utilization, the rack users shall be provided an opportunity to verify the consumption readings provided by the PDU installed by NSE / rack users. Rack users shall be provided time till ensuing weekend to satisfy themselves in this regard
- Any instance of exceeding 100% utilization post the above shall result in initiation of action by MSD as per the following stage wise action plan.

Stage	Number of non-compliance in a calendar month	Action
I	1	Email warning
II	3	Charges of Rs.10,000/- per rack per day of violation in calendar month towards fair usage charges of power
III	5	Charges as per stage 2 plus switching off power for 1 working day after providing 1 working day notice to provide time to the participant to rectify the issue if any.
IV	Violation of 1 day after restart of rack	Charges as per stage 2 plus switching off power for 3 working day after providing 1 working day notice to provide time to the participant to rectify the issue if any.

Note : Taxes as applicable shall apply on the above charges

The charges will be collected from the Exchange Dues account for the participant.

- NSE shall provide two network connectivity points to each rack for connecting with the NSE trading system.
- Participant can choose to use the two network connectivity points in either active-active mode or active-passive mode as per their design and network architecture.
- NSE shall provide 10 Ethernet copper cables from telecom Meet-Me room to each rack for connecting their devices to selected Internet Service Providers.

- Participants are permitted to perform their own cabling through their authorized vendors to connect their servers located in different racks in the same/ across phases
- All participant racks all point to point lease line will be commissioned via meet me room in NSE colocation an member rack
- Member may use existing Ethernet cables provided by NSE or/and lay their own cable between meet me room and participant rack subject to physical and technical feasibility.
- NSE is not responsible for quality or latency or other performance parameters of connectivity provided by telecom service providers to participant.

4. Material Checking:

- NSE reserves the right to inspect any and all incoming and outgoing material in the possession of visitors at any time inside NSE premises.
- NSE reserve the rights to not allow a person to carry any equipment/ cable that in NSE view is likely to be harmful to the colocation facility etc.

5. Right to Admission:

- In the event NSE determines that one or more COLO participant/ authorized vendor fails to follow the policy, the individual/s may be immediately denied access to the COLO facility
- Some of the reasons for denying access to colocation facility are as follows :
 - Work permit not being sent by authorized person of the participant.
 - Name of visiting person not mentioned in the work permit
 - Mismatch in name of visiting member in work permit and the photo id card.
 - Photo ID card not clear and name / photo not clearly visible.
 - Participants or their representative who have been banned from entering NSE premises.
 - Any participant if misbehaves with any staff of NSE / other vendor/ other participant representative
 - Failure to comply with NSE policies and work ethics
- The reason for denying entry to colocation facility is not limited to the above mentioned points.

6. Basic L1 IT Services:

- NSE shall provide basic L1 IT services to it's participant's via the colocation support staff
- NSE colocation support staff shall not operate any equipment inside the allocated rack through service request raised by participant's.
- Colocation support staff shall only perform basic services like hard reboot / cable movement / providing information available on device display.
- NSE colocation staff shall not be held responsible for any device failure or defect arising because of any activity performed by them on the request of member.

7. Code of Conduct:

- All participant's and their representatives are prohibited from operating; touching, opening or accessing any software, hardware or other equipment not belonging to the member or telecom vendor in the colocation facility. This includes, but is not exclusive to colocation cabinets, network hardware and servers, computers and monitors
- All waste and unused components must be removed after any work is carried out
- Visitors are prohibited from smoking, drinking or eating within the colocation facility, Meet-Me room etc.
- All doors to and from the colocation phases will remain closed at all times except when an authorized person is entering or exiting the COLO facility. Doors may not be left propped open at any time
- No hazardous or inflammable materials (including without limitation boxes, paper, and bubble wrap) may be taken into, stored or left within the colocation phase or other areas within colocation facility.
- The colocation facility must be kept free of packaging and kept in a clean and tidy condition at all times.
- NSE reserves the right to discard any such materials at its discretion without notice to the visitor/ COLO participant
- Electrical equipment of any kind (such as laptop computers, etc.) requiring the use of an electric wall outlet may only be operated with the express permission of designated NSE/ NSE authorized vendor representative.
- No equipment shall be placed in front of air conditioning units, electrical panels, fire extinguishers, and fire or exit routes

- No cables or other devices shall be permitted to be installed below the raised floor by colocation members.
- Drilling, sawing, soldering, burning or other similar activities are prohibited in the colocation facility by colocation members.