10Gbps Colocation Network: FAQ

1. **What are the upgrades in the Colocation?**
   The key upgrades in colocation network are as follows:

   a) Low latency switches have been deployed at Colocation.

   b) Dedicated colocation gateways are provided to route the algo orders generated at colocation to BSE Trading system with reduced hops for low round trip latency.

   c) Connectivity between members' Colocation Racks and Exchange's Colocation switches upgraded from 1 Gbps Copper to 10 Gbps Fibre network. Thus, Colocation network is now end-to-end on 10 Gbps Fibre network.

   d) Market price broadcast path hops for members on 10Gbps colocation network have been reduced.

   e) Support for EOBI(Tick-by-Tick) data is also available on 10G

2. **How many ports will be provided per member on Colo switches?**
   We recommend that members should connect their algo servers (a pair of primary and secondary servers) directly with the colocation switch of the Exchange. For this purpose, BSE will provide 2 ports each on the Exchange's primary and secondary switches in Colo.

3. **Can a member install a switch to connect multiple servers to Exchange Colo switch?**

   In case a member has multiple servers, then servers can be connected to member's 10G switch located in the rack which can be connected to Exchange Colo switch. Please note that BSE will not provide 10G switch to members and it will have to be procured by the members on their own.

4. **What if a member doesn't want to invest in a 10G switch to connect multiple servers?** It is recommended that members should migrate to 10G colo network. However, if a member doesn't want to invest in a 10G switch then they can continue on the current 1G network till the time 1G colo network is phased-out.

5. **What are the timelines for the phase out of 1G Colo network?**
   All new colo connections to members will be provided to members on 10G network only. Post migration of all existing members to 10G colo network, 1G network will be phased out. BSE will provide the timelines with adequate notice period for 1G network phase out.

6. **How many Solarflare cards will be provided by BSE?**
   BSE will provide max. 2 SolarFlare cards (SFN7322F) per member. Members can apply for these cards through BEFS – Technology Programme module.

7. **Can a member procure their own 10G network interface cards?**
   Yes, members can procure 10G cards on their own. It is recommended that members should check the compatibility of the cards with the servers on which the installation is required.

8. **Who will install the SolarFlare cards on the servers in colocation?**

Please refer to the following cases:

Case	Server owner	SolarFlare card owner	SolarFlare Card installation by
1	BSE	BSE	BSE and Netmagic teams
2	BSE	Member	Member. However, BSE and Netmagic teams will provide necessary assistance for the installation of these cards on the servers.
3	Member	BSE	
4	Member	Member	

9. **How to configure SolarFlare card for best results?**
Solarflare cards need to be configured with an additional acceleration driver called Onload to enable the best performance. The Onload drivers are available for select Linux platforms only. Using this software, the latency can be reduced further.

10. **Are there any specific mapping of user ids for Colocation?**
In order to avail of Colo facilities, members are advised to use the HF (High Frequency) session types. Such sessions have a feature of automatic cancellation of orders when an outage such as a disconnection or logoff occurs. This is ideally suited for Algo traders. In case members use the LF (Low Frequency) sessions, it is recommended that members do not run their algos on such servers. The LF sessions are primarily for trading terminals.

11. **How to inform the Exchange about HF/LF mapping required for user ids?**
Members can send an email to trading.ops@bseindia.com and their Relationship Manager with their request for changing the user id session from Non Co-location to Colocation or vice versa.

12. **Which API - ETI or IML should be used for interfacing with the BSE Trading System?**
In order to get the best performance, members are advised to use the ETI API as opposed to the IML. This API enables direct connectivity to the Exchange gateway, thereby eliminating the intermediate layer of the IML. In addition, the faster EOBI (Tick-by-Tick) and EMDI (Enhanced Market Data Interface) for market data shall enable members to get price ticks at a faster rate.

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