Network Connectivity

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1 Various modes of Connectivity

Exchange has built trading infrastructure in Exchange Square, Mumbai, Maharashtra that is known as Primary Site (PS) and GIFT City, Gandhinagar, Gujarat known as Disaster Recovery Site (DRS)

MCX technology infrastructure is the foundation of our business and a key factor in the Exchange's development. The Exchange's online trading platform is accessible to our members through our trader workstation or computer-to-computer link ("CTCL") using multiple connectivity media including, Leased lines – Point to Point, MPLS (wired or wireless last mile connectivity), and the Internet.

The Exchange remains neutral with respect to selection of Service Provider. Wherever, Member wishes to apply through Exchange, the same shall be provided with best effort basis; in few cases, Service provider may not be able to provide connectivity as their infrastructure may not be feasible at Member office or there could be techno-commercial reason.

Members of the Exchange may choose any mode of connectivity and service provider(s) suitable to their business needs and requirements and make application(s) to the Exchange. Alternate modes of connectivity with details of bandwidth, charges, service providers and application procedure.

The Exchange strongly recommends that Members are required to avail connectivity from two different service providers for better uptime of connectivity & Business Continuity.

Following Network Connectivity is introduced by the Exchange and Member can choose the connectivity as per their business requirements:

1.1 Point to Point (P2P) Leased Line

Point-to-Point (P2P) connection refers to communication between two nodes or endpoints. The Exchange allows Point-to-Point Leased Line connectivity up to 100 Mbps i.e. (2/10/20/30/40/45/75/100 Mbps).

Member can avail Point to Point (P2P) leased line facility by submitting application for availing connectivity either through Exchange or by applying direct to exchange empaneled Service Providers. Members may please note that transfer of connectivity between Exchange & direct to service provider or vice versa is not permitted.

1.1.1 Option 1 – Avail Point-to-Point leased line through Exchange-

Bandwidth	**Available Service Provider**
10/20/30/40/45/75/100 Mbps	Airtel, TCL

1.1.2 Option 2 – Avail Point-to-Point leased line directly from Service Provider

Bandwidth	Application direct to Service Provider for Primary Site (PS)	Application direct to Service Provider for Disaster Recovery Site (DRS)
2/10/20/30/40/45 /75/100 Mbps	Airtel, TCL, TTML/TTSL, Microscan, Tikona	Microscan, Tikona.

1.2 MPLS Leased Line

MPLS (Multi-Protocol Label Switching) is a mechanism in high-performance telecommunications network that directs data from one network to the next based on shortest path labels rather than long network addresses. MPLS can provide secure, cost effective, scalable, and managed end-to-end network connectivity. The Exchange allows MPLS Leased Line connectivity upto 40 Mbps, i.e. (2/10/20/30/40 Mbps).

Member can avail MPLS wired or wireless last mile leased line facility by submitting application for availing connectivity through Exchange.

1.2.1 Avail MPLS leased line through Exchange.

Bandwidth	Available Service Provider
2/10/20/30/40 Mbps	Airtel, TCL

1.3 Internet

Internet is the global system of interconnected computer networks; Member can avail the Internet connectivity directly from the respective Service Provider.

The Exchange has introduced RSA Hardware Token and SSL-VPN (secure socket layer) for users trading over Internet. RSA is a two-factor authentication (T-FA) to provide better and secure mode of connectivity for trading. T-FA is implemented using RSA Secure ID hardware token from RSA.

2 Network Connectivity Procedure - For Point to Point and MPLS Leased Line

2.1 Application and Feasibility

2.1.1 Option 1 Avail Point-to-Point / MPLS leased line through Exchange.

Members desirous of availing facility of 2/10/20/30/40/45/75/100 Mbps P2P and 2/10/20/30/40 Mbps MPLS (wired or wireless last mile) Leased Line connectivity through Exchange is required to send feasibility request over email to MCX-LeasedLine@mcxindia.com as per Network Connectivity Form.

On receipt of the said e-mail, Exchange shall process feasibility of the location from the service provider/s as per the choice indicated by the member. Thereafter feasibility details will be intimated to the member through email for obtaining confirmation to process further. Validity of the feasibility declared by the respective service provider is 15 days, thereafter member is required to do re-feasibility.

After receipt of the feasibility details from the Exchange, members are required to submit duly filled and signed undertaking as per Network Connectivity Undertaking-Leased Line to the Membership department.

2.1.2 Option 2 Avail P2P leased line directly from Service Provider.

Members desirous of availing connectivity directly from the Service Provider, need to submit the application over email to MCX-LeasedLine@mcxindia.com for obtaining No Objection Certificate (NOC) from the Exchange. While applying directly to the service provider member is required to submit the undertaking as per Network Connectivity Undertaking-Leased Line**.**

Thereafter**,** Exchange will process the application for Point to Point or MPLS leased line connectivity through the respective service provider.

2.2 Commercials for Point-to-Point Leased Line

2.2.1 Option 1 Avail Point to Point Leased Line through Exchange

Charges to service Provider

Charges Type	Bandwidth	Airtel	TCL
One Time charges (OTC) (INR)	10/20/30/40/45 /75/100 Mbps	15,000	15,000
Annual Recurring Charges (ARC) (INR)	10 Mbps	1,00,000	1,00,000
	20 Mbps	1,30,000	1,65,000
	30 Mbps	1,60,000	2,15,000
	40 Mbps	1,90,000	2,60,000
	45 Mbps	2,20,000	3,00,000
	75 Mbps	2,40,000	4,90,000
	100 Mbps	2,50,000	5,80,000

Note 1: The above-said charges are applicable for Mumbai region only. The charges for the links applied out of the Mumbai region will be as per actuals.

The above-mentioned charges are exclusive of any government taxes, duties and levies and the same are to be paid extra by members.

Payment Terms:

- For the first financial year, the annual charges are to be paid in advance for the first year from the date of leased line commissioning.
- For the second financial year, the annual charges shall be calculated on a pro-rata basis from completion of first year till March 31st.
- For the third financial year and their onwards, the annual charges shall be payable in advance.

2.2.2 Option -2 Last mile charges for Private Point to Point Leased Line

Members are required to pay last mile charges (OTC and ARC) directly to service provider in case the point-to-point leased line is obtained directly from service provider.

2.2.3 Port Charges to Exchange applicable for both the P2P leased line options

Bandwidth	Port Charges (Rs.)
2 Mbps	75,000
10/20/30/40/45/75/100 Mbps	2,00,000

The above-mentioned charges are exclusive of any government taxes, duties and levies and the same are to be paid extra by members.
The Port Charges are Non-Refundable.

Payment Terms:

- For the first financial year, the advance annual charges shall be calculated on a pro-rata basis from the date of leased line commissioning till March 31st.
- For the second financial year and their onwards, the annual charges shall be payable in advance.

2.3 Commercials for MPLS (wired and wireless last mile) Leased Line

Charges to service Provider

Charge Type	Bandwidth	TCL		Airtel	
		Without Router	With Bundle Router *	Without Router	With Bundle Router *
One Time charges (OTC)	2 Mbps	10,000	12,500	10,000	12,500
	10/20/30/40 Mbps	10,000	12,500	10,000	12,500
Annual Recurring Charges (ARC)	2 Mbps	75,000	89,000	69,000	84,000
	10 Mbps	1,82,000	2,20,000	2,02,000	2,42,000
	20 Mbps	3,18,000	3,84,000	3,38,000	3,78,000
	30 Mbps	4,22,000	4,88,000	4,42,000	4,82,000
	40 Mbps	5,10,000	5,85,000	5,30,000	5,70,000

The above-mentioned charges are exclusive of any govern4ment taxes, duties and levies and the same are to be paid extra by members.

*** Turn Around Time (TAT)** – To provision the MPLS leased line without router is 6 weeks and with bundle Router is 2-3 months from the date of application.

****Charges to Exchange** – No charges are applied by Exchange for MPLS Leased Line Connectivity.

Payment Terms:

- For the first financial year, the annual charges are to be paid in advance for the first year from the date of leased line commissioning.

- For the second financial year, the annual charges shall be calculated on a pro-rata basis from completion of the first year till March 31st.
- For the third financial year and their onwards, the annual charges shall be payable in advance.

2.4 Upgrading Leased line connectivity

Members desirous of upgrading a Leased line connectivity obtained from Exchange, are required to submit duly signed application as per the Network Connectivity Form to Membership department. The charges for upgrading the leased line would be charged on pro-rata basis as per the charges confirmed by service provider. On receipt of the demand note / invoice from the respective service provider, Exchange would inform member about the additional charges applicable for the upgrade. If the Upgradation of leased line connectivity is not feasible at the location, the same will be intimated to the member through email.

In case of connectivity is taken directly from the service provider, Member needs to inform Exchange regarding upgrading of the connectivity through email MCX-LeasedLine@mcxindia.com for record and user ID mapping.

2.5 Shifting of Leased line connectivity

Members desirous of shifting MPLS or Point to Point leased line connectivity are required to e-mail the new location details to MCX-LeasedLine@mcxindia.com as per Network Connectivity Form**.** If the shifting of leased line connectivity is feasible at new location, the same will be intimated to the member. Thereafter members should submit duly signed application as per the Network Connectivity Form to MCX membership department. Shifting charges will be debited after completion of shifting of the connectivity from the settlement account of their respective Clearing Member based on Network Connectivity Form submitted by Member to the Exchange.

2.5.1 Commercials and criteria for shifting of Leased Line

Type of Connectivity	Service Provider	Location	Shifting Charges
MPLS & Point to Point	AIRTEL / TCL	Allowed only within city and subject to feasibility of the new location.	10,000

The above-mentioned charges are exclusive of any government taxes, duties and levies and the same are to be paid extra by members.

- In case of Point-to-Point leased line connectivity directly applied to service provider then Member needs to inform Exchange for change of Installation address via email MCX-LeasedLine@mcxindia.com for record.

2.6 Surrendering of Leased line connectivity

Members desirous of surrendering network connectivity are required to submit duly signed application as per the Network Connectivity Form to MCX membership department.

- Members are not entitled to a refund of any Annual Recurring Charges (ARC) if the network connectivity is surrendered within a year of installation. From the second year onwards, members will be entitled to get refund of pro-rata annual recurring charges from service provider for the unexpired portion of that year. The un-expired portion shall constitute the period after completion of 30 days for Airtel and 45 days for TCL from the date of submission of surrender application to service provider.
- The applicable refund amount will be credited to member's settlement account as and when the same is received by the Exchange from the respective service provider.
- Members are requested to note that Port Charges will not be refunded with respect to financial year for which the same have been recovered, even if the leased lines are surrendered/cancelled prior to end of such financial year.
- Contract Period for all the links are as follows,
  a) Links without Router is 1 year.
  b) Links with Router is 2 years.
- In case of early Termination of MPLS Links procured with routers will attract charges of 50% of ARC for the remaining term as Early Termination Charges after minimum term period of 1 year from the date of commissioning.
- Any links that are terminated before the contract term will attract 100% of ARC as Early Termination Charges (ETC).

The Exchange shall process the application on receipt of complete documents as prescribed and after verifying the dues if any and related compliance formalities.

Important Note:

a) Members who are using only Point to point Leased circuit(s) to connect to the primary site of the Exchange are advised to obtain separate connectivity to the MCX Disaster Recovery Site (DRS) at Gift City to participate in Mock Trading or live trading from DRS site.
b) It is recommended that Members are required to avail connectivity from two different service providers for redundancy and uptime of network connectivity & business continuity.
c) MPLS Wireless last mile connectivity will be provided to members, only in case of non-feasibility of wireline connectivity.
d) Network feasibility at member's location is at the discretion of the service provider chosen by the member.
e) Network latency may vary depending upon the mode of connectivity and the geographical distance between Member's trading location and the Exchange.
f) Exchange has always put best efforts to deliver any network connectivity at the earliest. However considering dependency on service provider, turnaround time for feasibility check is 1 week, for application process and connectivity delivery is 6 weeks (without Router) and 2-3 months (with Router).
g) Upon surrendering the network connectivity, members are required to return all applicable network termination equipment owned by the service provider to ensure no commercials implications.
h) The minimum pre-requisite for installation of **MPLS** wireless connectivity is as below:
    1. Space with Air-Cooled/Dust-Free environment for networking devices.
    2. Building Permission and secured space for Pole/Tower installation at building roof top.
    3. Stabilized Uninterrupted Power supply 24x7 with earthing of E/N<=3V

4. Stable and uninterrupted power supply, 2x6 amp Power Sockets
5. Inbuilding cable shaft (If available) for cable safety from roof top pole to indoor unit
6. Members will have to ensure the physical safety of networking devices installed by service provider. Charges will be applicable in case of any physical damage to devices.

i) Members are requested to note that the Exchange is only facilitator between the members and service providers for establishing connectivity to the Exchange trading platform. MCX is not responsible or liable for any loss or damage etc. suffer due to any delay, disturbance, or non-availability of connectivity or due to any reason because of service provider / network integrator or otherwise.

3 RSA Token for Internet Connectivity

- **Introduction**

The Exchange has introduced RSA Hardware Token for users trading over Internet which is a two-factor authentication (T-FA) to provide better and secure mode of connectivity for trading. T-FA is implemented using RSA Secure ID Software token from RSA, one of the premier providers of security solutions.

RSA Secure ID two-factor authentication comprises of a password or PIN (the first factor) and an authenticator (the token which is the second factor) provides reliable and secured user authentication. Hence for login to the system user needs to key in the username & password and the one-time password (OTP) generated by the RSA token which changes every minute. Only after providing the correct username-password along with a valid OTP the user will be allowed to login for trading.

- **Applicable Users**

Members, who are trading over the Internet, essentially need to procure RSA Software token for two factor authentication for better and secure mode of connectivity.

- **Mode of Delivery of RSA Token**

The Exchange provides RSA software token & applicable RSA Manual to its members via email. Users need to follow instructions given in the manual for usage of RSA token.

- **Charges for RSA Token**

Sr. No.	Description	Charges per Token (Rs.)	Remarks
1	New RSA Token	4,000	Charges includes procurement of RSA Token, Activation, RSA License.
2	Renewal of RSA Token	1,500	

**Charges are exclusive of applicable taxes.*

The RSA Software token shall be valid to the expiry date shown in RSA secure Id Application and thereafter the Exchange will issue fresh new RSA Hardware Token to the members on the basis of email confirmation by the Member.

- **Procedure for usage of RSA Token**

Users must send requests through UIMS portal for mapping the user ID on internet. After mapping the user ID on internet Member must send request to customer support team (customersupport@mcxindia.com) for requirement of RSA token in the following format.

User ID	User Name	Member ID	Member Name	Version (Desktop / Android / IOS)	Mobile No

Software RSA token is issued in three version Desktop, Android version (mobile) and IOS Mobile. Member has to choose one version.
Member can apply for RSA token with preference to install on

1) Desktop/laptop

2) Android mobile

3) IOS mobile

After issuing the RSA Token to applicable users, the Exchange flashes message on the Trading Terminal for start usage of RSA Token for two factor authentication for trading through Internet.

RSA Software token once issued to a user cannot be used by any other user. However, when a user becomes inactive, the RSA Software token can be re-validated for another user without any charge.

Renewal of RSA token: - Before expiry date of the token MCX will issue the new RSA token after receiving written e-mail confirmation from member. The applicable charge will be deducted from member settlement account after delivery of the software RSA token.

Re-Validation of RSA token: Whenever user becomes inactive from internet, the RSA Software token mapped to that user can be re-validated for another user. The re-validated token can be used till the end of its validity period.

Conversion of RSA Token: Member can change the preference of RSA token from Desktop to Android and vice versa.

4 Annexures

4.1 Network Connectivity Form

On Member's letterhead
Date:
To,
The Membership Department
Multi Commodity Exchange of India Ltd
Exchange Square,
CTS No. 255, Suren Road, Andheri East
Mumbai – 400093

Member Name:
Member ID:

Network Connectivity Preference

☐ MPLS ☐ Point to Point

Application Type

APPLICATION TYPE	Tick √
New Order	
Shifting	
Surrender	
Upgradation	
Downgrade	
No Objection Certificate (NOC) for Private Point to Point Leased Line	

Details of site are as follows: -

Sr. No.	Description	Details
1	Service Provider	
2	Bandwidth *	
3	Router (Y/N) *(Applicable for MPLS only)*	
4	Connectivity Installation Address ***	

Sr. No.	Description	Details
5	City & PIN code	
6	District and State	
7	Contact person Name	
8	Mobile Number of Contact Person	
9	Contact Number with STD code	
10	FAX Number	
11	Email Address	
12	Feasibility of the location checked with the Exchange	YES / NO
13	Circuit ID ****	
14	IP Address ****	

**Bandwidth to be mentioned for shifting of MPLS / Point to Point connectivity and in case of upgrade of leased line connectivity please mention from and to bandwidth.*
**** In case of shifting please mention new address.*
***** Mandatory for shifting / upgrade / downgrade/ surrender application.*

We hereby confirm that the installation address mentioned above is (please tick the option as applicable)

- Registered Office Address of the Member
- Branch Office address of the Member
- Address of our Registered Authorized Person (AP) with the Exchange
- Third Party Datacenter

Thanking you.
Yours faithfully
For ……. (Name and signature of the authorized signatory with Company seal)

Terms and Condition:

<u>Surrender:</u>

Kindly remove mapping of the following USER IDs from the said MPLS / Point to Point (Provide only the user ids below):
a) b) c) d) e)
We hereby certify that No USER IDs other than mentioned above are mapped on the said MPLS / Point to Point.

We hereby agree and bind ourselves to be responsible for all acts, quotations and transactions done, trade made of affected by the users mapped on the said connectivity on the trading system. We will be responsible to Exchange for clearing any dues for these User(s).

4.1.1 Authorization letter

Format for **Trading Member** (Authorization letter from PCM/ITCM/TCM in favour of the Exchange to debit Annual Recurring Charges)

To be printed on letter head of the respective PCM / ITCM / TCM

Date:

To
The Membership Department
Multi Commodity Exchange of India Limited
Exchange Square, CTS No-255, Suren Road,
Chakala, Andheri (East),
Mumbai – 400 093
Fax No.: 022 – 6726 9566

Dear Sir,

Sub: MPLS / Point to Point Leased line annual recurring charges debit facility for our Trading member,

_____ (Name of the Trading Member) having Member ID _____.

This has reference to Exchange circular no. _____ dated _____.

I / we authorize Exchange to debit our settlement account no. _____ in _____ (Name of the bank) towards the annual recurring charges of leased line.

For_____
(Name of PCM / ITCM / TCM)

Thanking you.
Yours faithfully
For ……. (Name and signature of the authorized signatory with Company seal)

4.2 <u>Network Connectivity Undertaking-Leased Line</u>

<u>(On Non-judicial stamp paper of Rs. 600/-)</u>

UNDERTAKING CUM INDEMNITY

(For Leased Line Connectivity)

This Non-Judicial Stamp paper of Rs._____ forms part and parcel of this Undertaking cum Indemnity submitted to Multi Commodity Exchange of India Limited executed by

Mr. /Mrs. /M/s. _____
_____on _____ day of _____, 20 _____.

THIS UNDERTAKING CUM INDEMNITY is made on this ..... day of ....., 20…….. by ..... admitted as a Trading-Cum-Clearing Member/ Institutional Trading Cum Clearing Member/ Professional Clearing Member (Member ID No:_____) of Multi Commodity Exchange of India Limited and having his address/its registered office at …… ……..(Hereinafter referred to as "member/I/we/me/us" which expression shall unless repugnant to the context or meaning thereof include his/its heirs, successors, assigns and legal representatives)

IN FAVOUR OF
Multi Commodity Exchange of India Limited, a company incorporated under the Companies Act, 1956 with its corporate office at CTS No. 255, Exchange Square, Suren Road, Andheri east, Mumbai- 400 093 (hereinafter referred to as "MCX" which expression shall unless repugnant to the context or meaning thereof include its successors or assigns

WHEREAS PURSUANT TO MCX MASTER CIRCULAR NO. …….. DATED …… AND IN CONSIDERATION OF MCX PERMITTING ME/US AS A MEMBER TO USE THE ……., I / WE UNCONDITIONALLY AND IRREVOCABLY UNDERTAKE AND AGREE:

1. I/We agree that the Leased Line will be used purely for the purpose of trading on MCX only.

2. I/We agree that this Leased Line will not be interconnected to any of the Leased Line / Data circuit / Network / PSTN / EPABX etc. of any other service providers which are not permitted by the terms and conditions of Telegraph Authority. I / We further agree to extend facility to the Telegraph authority in order to enable monitoring of the purpose, performance and operation of the circuit, as and when required.

3. I/We hereby agree to abide by the provisions of Indian Telegraph Rules in force and as modified from time to time and such other terms and conditions prescribed by the telegraph Authority.

4. I/We agree that necessary charges for registration / installation / Advance annual rental / Arrears, if any will be paid to the controlling / billing authority of service provider & MCX, as and when we receive demand note / advice from service provider / MCX and when such charges become due.
5. I/We agree that I/We shall pay the surrender charges and other expense as prescribed under MCX Circular Ref No. …… dated ……. and any subsequent circulars issued in this respect, from time to time, in the event of surrender of my /our leased line(s) connectivity.

6. I /we agree that I / we shall pay the cancellation charges and other expenses incurred to establish the Leased Line as requested by me / us that may become

payable, in the event of cancellation of the application / closure of the Leased line at a later date.

7. I/We do hereby agree to indemnify the Govt. of India / DOT / Service provider and keep them indemnified against any loss damage claim, cost, charges, expenditure incurred by or made against them in respect of loss of rent / call charges, violation of C.U.G. norms due to misuse of the Leased Line or otherwise whatsoever in the matter.

8. In case service provider provides us modems, it will be our responsibility to maintain the same safely. In case of any physical damage or theft we will bear the charges specified by service provider.

9. I/ we undertake to authorize MCX to inspect and test IT Infrastructure related to trading system at my/our site without any prior notice.

10. I / We shall render all possible assistance and co-operation to MCX by providing access to any kind of information in any form as it may require and I/we hereby undertake to produce such documents, records, accounts, books, data howsoever stored including data stored in magnetic tapes, floppy diskettes, etc. and any other information as may be required by MCX at its discretion.

11. I / We agree and undertake that MCX shall not be liable for any direct or indirect loss, damage, costs, claims and expenses whatsoever caused or contributed by any event of force majeure. For the purposes of this Clause, "Force Majeure" means and includes wars, insurrections, revolution, fires, floods, epidemic, quarantine restrictions, declared general strikes in relevant industries, act of God, act of the Government of India and any concerned State Government and such other acts or events beyond MCX's control and further the above is without prejudice to the rights already accrued to MCX due to my/our failure to perform either in full or in part, my/our obligations prior to the occurrence of events of Force Majeure.

12. I / We shall not hold MCX responsible or liable for any loss, damage, etc., suffered due to any delay, disturbance or non-availability of connectivity or due to any reason because of Service Provider /Network Integrator or otherwise, at any time including the reasons stated in Force Majeure clause hereinabove.

13. I / We shall indemnify and keep indemnified MCX harmless against every and all claims, demands, damages, liabilities, losses and expenses, etc., suffered by it directly by reason of my / our non-compliance, contravention with any of the provisions of this Undertaking or any penalty imposed by Service Provider /Network Integrator or DOT /Regulatory or statutory Authorities, due to my/ our non-compliances or violation of any provisions of the applicable Act(s) or Rules and Regulations in force.
14. I / We agree that no forbearance, delay or indulgence by MCX in enforcing the provisions of this Undertaking shall prejudice or restrict the rights of MCX nor shall any waiver of its rights operate as a waiver of any subsequent breach and no rights, powers, remedies herein conferred upon or reserved for MCX is exclusive of any other right, power or remedy available to MCX and each right, power or remedy shall be cumulative.

15. I/ We hereby undertake and agree that this Undertaking-cum-Indemnity shall be valid and effective for any leased line(s) obtained by the undersigned for connecting to MCX, from time to time. Further, this Undertaking-cum-Indemnity does not lapse till such time, the Exchange discharges the undersigned.

16. That I / we shall execute, sign and subscribe to such other documents, papers, agreement, covenants, bonds, and/or undertakings as may be prescribed or required by MCX from time to time.

17. I/We also agree that in the event of my/our non-compliance with any of the provisions as mentioned above, MCX shall take such action(s) against us as it may deem fit in this regard.

IN WITNESS WHEREOF this Undertaking-cum-Indemnity is executed by the undersigned on the day, month, year and the place mentioned above.

Name, address & signature Witness 1 …… Witness 2 ……	Stamp & Signature of the Authorized Signatory of Member …….. ……..

Date: Place:

The common seal of _____ _____ was hereunto affixed pursuant to a resolution passed at a meeting of The Board of Directors of the company held on _____ day of _____, 20____ in the presence of * _____ _____.

Signature 1 **Signature 2**

Stamp **Stamp**

* As required by the Articles of Association of the Company

4.3 Router Specification

Bandwidth Type – Support up to 25 Mbps.

Router Model and Component	**Specifications**
Model	C8200L-1N-4T (4GE,1 NIM,4G MEM,DNA-Essentials)
DNA License	Cisco DNA Essentials On-Prem Lic 3Y - upto 25M (Aggr, 50M) (DNA-P-T0-E-3Y)
IOS	UNIVERSAL (SC8KBEUK9-176)

Rack Mount Kit	Cisco Catalyst 8200 Rack mount kit - 19" 1RU

Bandwidth Type – Support up to 100 Mbps.

Router Model and Component	**Specifications**
Model	C8200L-1N-4T (4GE,1 NIM,4G MEM,DNA-Essentials)
DNA License	Cisco DNA Essentials On-Prem Lic 3Y - upto 200M (Aggr, 400M) (DNA-P-T1-E-3Y)
IOS	UNIVERSAL (SC8KBEUK9-176)
Rack Mount Kit	Cisco Catalyst 8200 Rack mount kit - 19" 1RU

4.4 Technical support contact details of service provider

AIRTEL

Centralized Fault Management : 1800102001
Email address : enterprise.data@airtel.in

TCL

Members are requested to try respective city number as the first preference. If for any reason the helpdesk number is not accessible, please call TCLs centralized Mumbai Helpdesk number.

CITY	PHONE NO	CITY	PHONE NO
Bangalore	080 - 66600245	Hyderabad	040 - 66234600
Bhubaneshwar	0674 - 2546357	Indore	0731 - 2550734
Chandigarh	0172 - 5047357	Jaipur	0141 - 5104357
Chennai	044-66664357	Jalandhar	0181- 5084357
Coimbatore	0422-6554357	Kanpur	0512 - 2584300
Dehradun	0135- 2774357	Kolkata	033 - 23554357
Delhi	011- 66514357	Mumbai	022-66504357
Ernakulam	0484 - 2421740	Patna	0612 - 2234634
Gandhinagar	079-64512375/76	Pondicherry	0413 - 6554357
Goa	0832- 6653695	Pune	020- 66154357
Guwahati	0361 - 2464357	Thiruvanthapuram	0471 - 2334357
Centralized Mumbai Helpdesk number : +91-22-66504357 / 18002660660			
Email address : corp.helpdesk@tatacommunications.com			

Microscan:

Level	Title/Function	Non-Service Affecting	Service Affecting	Contact Details		
				Name	**Email**	**Phone**
Level 1	Network Support Associate	Immediate	immediate	NOC Help Desk	llc.support@microscan.co.in	022-66871800
Level 2	Manager NOC operations	2 Hours	1 Hour	Rohan Nakhawa	rohan.nakhawa@microscan.co.in	+91-7045785478
Level 3	Network Manager	4 Hours	2 Hours	Uzair Khan	uzair@mciroscan.co.in	+91-8879971867
Level 4	Senior Network Manager	6 Hours	3 Hours	Clifford D'Souza	clifford@microscan.co.in	+91-8879971793
Level 5	Technical Head/BU head	12 Hours	6 Hours	Prashant Pradhan / Jayesh Kotak	prashant.pradhan@microscan.co.in jayesh.kotak@microscan.co.in	+91-9223999102 +91-7506705080

Tikona:

- Enterprise technical desk - 24*7 available
- Phone number - 0120 496.3250/51/52/53/54/55
- Email id - enterprisetechnicaldesk@tikona.in
- Escalation Matrix to be used below in case resolution is beyond TAT

Tikona Service Escalation matrix				
Level	**Service Affecting**	**Contact Details**		
Level 1	**(Initial)**		Enterprisetechnicaldesk@tikona.in	(0120-4963250)
Escalation Level 2 CSM	**(4 hrs)**	Jaseen P	Jaseen.P@tikona.in	9967590360
Escalation Level 3	**(6 hrs)**	Deepanshu Munjal	Deepanshu.M@tikona.in	9971182266
Escalation Level 4	**(8 hrs)**	Arnab Adhikari	Arnab.adhikari@tikona.in	9810449856
Escalation Level 5	**(10 hrs)**	Vinay Kakkar	Vinay.kakkr@tikona.in	9818737895

4.5 Reference – List of Circulars

Connectivity Type	Circular No.
Leased Line - Point to Point	MCX/142/2004 dated November 17, 2004
	MCX/TECH/507/2009 dated December 5, 2009
	MCX/TECH/342/2008 dated October 25, 2008
	MCX/TECH/193/2015 dated July 3, 2015
	MCX/TECH/035/2014 dated February 11, 2014
	MCX/TECH/376/2012 dated November 2, 2012
	MCX/TECH/028/2013 dated January 28, 2013
	MCX/TECH/069/2016 dated March 10, 2016
	MCX/TECH/034/2016 dated February 5, 2016
	MCX/TECH/235/2008 dated July 8, 2008
	MCX/TECH/107/2008 dated March 15, 2008
	MCX/TECH/251/2016 dated August 30, 2016
	MCX/TECH/031/2017 dated February 3, 2017
	MCX/TECH/095/2020 dated February 14, 2020
MPLS Leased Line	MCX/TECH/068/2016 dated March 10, 2016
	MCX/TECH/098/2010 dated March 25, 2010
	MCX/107/2004 dated October 1, 2004
	MCX/130/2004 dated October 30, 2004
	MCX/142/2004 dated November 17, 2004
	MCX/TECH/038/2013 dated February 1, 2013
	MCX/TECH/173/2017 dated June 8, 2017
	MCX/TECH/183/2017 dated June 16, 2017
	MCX/TECH/077/2019 dated February 15, 2019
	MCX/TECH/713/2020 dated September 28, 2020
	MCX/TECH/973/2020 dated December 24, 2020
Internet & RSA	MCX/431/2005 dated December 21, 2005
	MCX/TECH/148/2008 dated April 23, 2008
	MCX/019/2006 dated January 14, 2006
	MCX/395/2006 dated September 16, 2006
	MCX/010/2005 dated January 11, 2005
Master Circular	MCX/TECH/316/2016 dated September 29, 2016
	MCX/TECH/291/2017 August 14, 2017
	MCX/TECH/460/2017 December14, 2017