

Moscow Exchange colocation Rules and Conditions

(Dataspace Data center)

The present rules and conditions can be amended at any time. The actual edition of the rules and conditions is published on the Moscow Exchange web site: <http://moex.com>.

In addition to terms and definitions specified in the Rules of IT Services Provided by Public Joint Stock Company Moscow Exchange MICEX-RTS, the following terms and definitions are also used:

«**Dataspace DC**» - complex specially designed and built for the installation of computer systems and equipment, which is properly certified in accordance with international standard level of Uptime Institute TIER III, and which is located in a non-residential building at: Building 11/9, Sharikopodshipnikovskaya st, Moscow, Russia (hereinafter - the "data center");

«**Structured cable system**», «**SCS**» - a set of cables and switching equipment, used to organize local computer networks and x-connects. It includes cables between cabinets, patch cords, patch panels, mounting equipment, etc.;

«**Production and game systems network segment**» – logically and/or physically isolated part (segment) of the Exchange Trading Network in the Co-location Facility designed to enable technical access to MOEX trading systems and gaming systems;

«**UAT network segment**» – logically and/or physically isolated part (segment) of the Exchange Trading Network in the Co-location Facility designed to enable technical access to MOEX UAT systems;

«**Internet-facing network**» - logically and / or physically isolated part (segment) of the Co-location Facility network, designed for Internet access.

1. Equipment requirements

1.1 Hardware requirements

1.1.1 Strictly the equipment that meets the following conditions is allowed for co-location:

- Certified in Russian Federation (meeting technical requirements of Customs Union or GOST R standard).
- Cabinet-mount equipment supplied with standard mount kit (slides / rails / bcabinetets) for 19" cabinets.
- The equipment must be supplied with ventilation system compatible with hot/cold aisle containment mode (front inlet, back exhaust).
- Equipment must support power supply with a voltage of 200V.
- Equipment must be supplied with power cables with 0.5/0.75/1.0/1.5 sq. mm cross section, with ground bar. The electrical cable parameters should comply with the Electrical Code (PUE). The cable should have IEC C14 type outlet.
- Equipment must be supplied with embedded or mounted power supply unit. Cables with power supply units on the plug are strictly forbidden.

1.1.2 Two power supply units in reserve mode are required.

1.1.3 For per-unit co-located equipment an independent remote administration system (HP ILO Advanced, IBM RSA, DELL DRAC, IPMI, etc.) is required. For pre-cabinet colocation an independent remote administration system is recommended.

1.1.4 The following equipment is prohibited:

- with non-standard power supply jacks;
- with traces of unauthorized modification, including power circuit;
- with wireless modules/devices (any type);
- with sound/video recording devices/modules;

- damaged or inoperable equipment.

1.2 Equipment labeling

- 1.2.1 For each piece of equipment the Technical center assigns unique ID, hereinafter – Label ID. Stickers containing Label ID are provided by the Technical center and are stuck to 3 sides of the equipment (top, front and back panels) in order to ensure proper equipment identification within cabinet.
- 1.2.2 All equipment should have visible serial numbers for proper documentation.
- 1.2.3 Power on/off and reset buttons should be clearly marked.
- 1.2.4 Power supply units and network interfaces should be visibly numbered.
- 1.2.5 If pp. 1.2.2–1.2.4 requirements are not met, the Technical center reserves the right to refuse colocation services.
- 1.2.6 If the labels are damaged or the labelling is controversial for already collocated equipment, the Technical center reserves the right to refuse Remote hands services and request the Client to remedy equipment labelling issues as soon as possible.

1.3 Cabinet mounting and power

- 1.3.1 The equipment specs should meet power consumption and heat release limits:
 - Per cabinet colocation – 6 KW and 20472 BTU/hour per one cabinet.
- 1.3.2 For per-unit colocation the Technical Center reserves corresponding space in cabinet based on the size of ordered services but not more than 20 RU (units) in height and 6KW/20472 BTU/hour per power supply unit specification.
- 1.3.3 Equipment should be connected to different power inputs on the cabinet (two different PDUs).
- 1.3.4 If the equipment is supplied with ground terminal, it should be grounded to the copper ground bus or stand on its body in accordance with GOST 12.1.030-81.
- 1.3.5 Top 3 (three) units #46-48 in the cabinet as well as 3(three) units #24-26 are reserved for the Technical Center network equipment and/or its patch panels. Equipment mounting in these units including for the x-connects purposes is prohibited.
- 1.3.6 Storage of any goods and possessions, including repair kits, hot-swap components, unmounted equipment, packaging or other materials in spare room of unused units within a cabinet as well as on the top of the cabinet and on the floor within the cabinet is prohibited.
- 1.3.7 The Client is prohibited from performing network cabling (copper, fiber, or any other cable types) between the cabinets including between two cabinets both used by the Client.
- 1.3.8 Equipment cabling to PDUs located in other cabinets is strictly prohibited.
- 1.3.9 The Client is prohibited from installing his own PDUs into his cabinet. Installation of ATS (Automatic switches reserve) systems is also strictly prohibited.
- 1.3.10 The Client is prohibited from installing his own PDUs. Installation of power splitters is prohibited.
- 1.3.11 The use of liquid cooling systems equipment is permitted and is a subject of additional approval by the Technical Center, and is only allowed for per-cabinet colocation.

2. Network connectivity

2.1 Equipment connection to the Exchange network.

- 2.1.1 The following types of connection service to the Exchange network are possible: connection to MOEX trading systems and gaming systems, or connection to the Exchange network with access to UAT segment only.
- 2.1.2 Connection of network equipment to the Exchange network is provided in accordance with requirements specified in pp. 2.6 and 2.8, connection of server equipment is provided in accordance with requirements provided in pp. 2.3 and 2.5.
- 2.1.3 Combination of connections used to access production and game trading systems as well as

connection to access UAT trading systems through a single device is possible, however such connections to different network segments should be organized through different individual ports (port pairs).

2.2 Equipment connection to the Internet.

- 2.2.1 Connection of network equipment to the Internet is provided in accordance with requirements specified in p. 2.7, connection of server equipment is provided in accordance with requirements provided in p. 2.4.
- 2.2.2 Combination of connections used to access trading systems as well as connection access Internet through a single device is possible, however such connections to different networks should be organized through different individual ports (port pairs).

2.3 Server equipment connection to production and game systems network segments.

- 2.3.1 Server equipment connection to production and game systems network is provided through the Technical center network equipment using 10G, 1G ports and 1G ports with bandwidth limited to 100M.
- 2.3.2 Server equipment connection to the Technical Center is done by pair of ports (two ports for each connection) in redundant mode (LACP, IEEE 802.3AX/IEEE 802.3ad). On the Technical Center side each pair of ports is allocated on two different network devices.
- 2.3.3 Each pair of ports on the Client side should be set to Active-Active.
- 2.3.4 LACP group should be configured with 30 seconds timeout.
- 2.3.5 The Client's server equipment is connected to the Technical Center with cables supplied by the Technical Center. Interim equipment and cables from Clients are not allowed.
- 2.3.6 SFP modules (if needed) for Technical center-side connections are provided by the Technical center, for Client-side connections are provided by the Client.
- 2.3.7 Connections to 10 Gbit/s ports on the Technical Center equipment are done in accordance with 10GBASE-SR standard with double multimode fiber cables with LC-LC connectors and 10GBASE-SR modules on the Technical center side. 10GBASE-SR network interfaces with SFP+ or QSFP connectors, or a module adapter for SFP+ are allowed on the client's site.
- 2.3.8 Connections to 1 Gbit/s ports on the Technical Center equipment are done in accordance with 1000BASE-T/1000BASE-TX standard with copper UTP Cat5e/Cat6 cables with RJ45 connectors. The client can also use network interfaces with RJ45 or SFP standard connectors using 1000BASE-T standard modules.
- 2.3.9 Connections to 1 Gbit/s ports with bandwidth limited to 100 Mbit/s on the Technical Center equipment are done in accordance with 100BASE-T/100BASE-TX standard with copper UTP Cat5 cables with RJ45 connectors.
- 2.3.10 Network interface pairs on the client equipment used for connection to the Technical center equipment should have trunking configured (IEEE 802.1q) for redundancy (LACP, IEEE 802.3ad).
- 2.3.11 Bandwidth and duplex port mode on the Client equipment should be set to 100-full for 1 Gbit/s connections with bandwidth limited to 100 Mbit/s or "auto" – otherwise.
- 2.3.12 Number of IP/MAC addresses per port on the Technical Center equipment should not exceed limits set for ordered connection service.
- 2.3.13 Level of broadcast traffic received from the Client equipment should not exceed 2 Mbit/s.
- 2.3.14 The Technical center provides separate private range /24 networks for each Client for internal use (RFC 1918) which should be used for specific services.
- 2.3.15 For each connection the Technical Centre sends and receives traffic to/from specific IP-addresses allocated for the Client for provision of specific services, if such IP-addresses have been enabled for the Client to be used to access production and game trading system segments.
- 2.3.16 IP addresses for Client servers are provided by the Technical Center as part of the relevant connection services. To receive IP addresses and network configuration, the Client should fill out

IP address allocation request as shown in Annex #9. When issuing IP addresses the Technical Center provides necessary information required to configure the VLANs, subnet masks, broadcast network addresses (if applicable).

2.4 Server equipment and management interfaces connection to the Internet.

- 2.4.1 Server and dedicated management interfaces (mgmt-port) of the network equipment connection to the Internet are provided through the Technical Center premises using 10 Gbit/s, 1 Gbit/s ports or 1 Gbit/s ports with bandwidth limited to 100 Mbit/s.
- 2.4.2 Server connection to the Technical Center equipment is done by pair of ports (two ports for each connection) in redundant mode (LACP, IEEE 802.3AX/IEEE 802.3ad). On the Technical Center side each pair of ports is allocated on two different network devices. For network device management interfaces (mgmt-port) as well as independent client control modules (HP ILO Advanced, IBM RSA, DELL DRAC, IPMI and other) with single dedicated interface 100BASE-TX/1000BASE-TX control module the connection is done through one port on the Technical Center side. In this case the network group mode is not configured and requirements set out in p. 2.2.3, 2.2.4, 2.2.5, 2.2.11 of the present Rules are not applicable.
- 2.4.3 Each pair of ports on the Client side should be set to Active-Active.
- 2.4.4 LACP group should be configured with 30 seconds timeout.
- 2.4.5 The Client's server equipment is connected to the Technical Center with cables supplied by the Technical Center. Interim equipment and cables from Clients are not allowed.
- 2.4.6 SFP modules (if needed) for Technical center-side connections are provided by the Technical center, for Client-side connections are provided by the Client.
- 2.4.7 Connections to 10 Gbit/s ports on the Technical Center equipment are done in accordance with 10GBASE-SR standard with double multimode fiber cables with LC-LC connectors and 10GBASE-SR modules on the Technical center side. 10GBASE-SR network interfaces with SFP+ or QSFP connectors, or a module adapter for SFP+ are allowed on the client's site.
- 2.4.8 Connections to 1 Gbit/s ports on the Technical Center equipment are done in accordance with 1000BASE-T/1000BASE-TX standard with copper UTP Cat5e/Cat6 cables with RJ45 connectors. 1000BASE-T network interfaces with RJ45 connectors, or SFP are allowed on the client's site.
- 2.4.9 Connections to 1 Gbit/s ports with bandwidth limited to 100 Mbit/s on the Technical Center equipment are done in accordance with 100BASE-T/100BASE-TX standard with copper UTP Cat5 cables with RJ45 connectors.
- 2.4.10 Network interface pairs on the server equipment used for connection to the Technical center equipment should have trunking configured for redundancy (LACP, IEEE 802.3AX/IEEE 802.3ad).
- 2.4.11 Bandwidth and duplex port mode on the Client equipment should be set to 100-full for 1 Gbit/s connections with bandwidth limited to 100 Mbit/s or "auto" – otherwise.
- 2.4.12 Number of IP/MAC addresses per port on the Technical Center equipment should not exceed limits set for ordered connection service.
- 2.4.13 Level of broadcast traffic received from the Client equipment should not exceed 2 Mbit/s.
- 2.4.14 The Technical center provides separate private range /24 networks for each Client for internal use (RFC 1918) which should be used for specific services.
- 2.4.15 For each connection the Technical Centre sends and receives traffic to/from specific IP-addresses allocated for the Client for provision of specific services, if such IP-addresses have been enabled for the Client to be used to access Internet.
- 2.4.16 IP addresses are provided by the Technical Center as part of the relevant connection services. To receive IP addresses and network configuration the Client should fill out IP address allocation request as shown in Annex #9. When issuing IP addresses the Technical Center provides necessary information required to configure the VLANs, subnet masks, broadcast network addresses (if applicable).
- 2.4.17 Network connection between the Client equipment and the Internet is secured by the Technical center firewalls in accordance with configuration requested by the Client which is approved by the Technical Center.

- 2.4.18 Outbound Internet connections from network device management interfaces (mgmt. port), as well as from independent client control modules (HP ILO Advanced, IBM RSA, DELL DRAC, IPMI and other) are prohibited by the Technical center.
- 2.4.19 Network policies allowing inbound connections from Internet to the Client equipment using most broadly used protocols (22/tcp, 23/tcp, 3389/tcp), and for independent client control modules – additional standard protocols (80/tcp, 443/tcp, 5900/tcp) are only allowed for limited white-listed Internet IP addresses.

2.5 Server equipment connection to UAT network segment.

- 2.5.1 Server equipment connection to UAT system network is provided through the Technical center network equipment using 10G, 1G ports and 1G ports with bandwidth limited to 100M.
- 2.5.2 Server equipment connection to the Technical Center is done by pair of ports (two ports for each connection) in redundant mode (LACP, IEEE 802.3AX/IEEE 802.3ad). On the Technical Center side each pair of ports is allocated on two different network devices. It is allowed to connect the server equipment to the Technical Center equipment using only one port, but it is not recommended. In this case port redundancy mode should not be configured.
- 2.5.3 The Client's server equipment is connected to the Technical Center with cables supplied by the Technical Center. Interim equipment and cables from Clients are not allowed.
- 2.5.4 Each pair of ports on the Client side should be set to Active-Active.
- 2.5.5 LACP group should be configured with 30 seconds timeout.
- 2.5.6 SFP modules (if needed) for Technical center-side connections are provided by the Technical center, for Client-side connections are provided by the Client.
- 2.5.7 Connections to 10 Gbit/s ports on the Technical Center equipment are done in accordance with 10GBASE-SR standard with double multimode fiber cables with LC-LC connectors and 10GBASE-SR modules on the Technical center side. 10GBASE-SR network interfaces with SFP+ or QSFP connectors, or a module adapter for SFP+ are allowed on the client's site.
- 2.5.8 Connections to 1 Gbit/s ports on the Technical Center equipment are done in accordance with 1000BASE-T/1000BASE-TX standard with copper UTP Cat5e/Cat6 cables with RJ45 connectors. 1000BASE-T network interfaces with RJ45 connectors, or SFP are allowed on the client's site.
- 2.5.9 Connections to 1 Gbit/s ports with bandwidth limited to 100 Mbit/s on the Technical Center equipment are done in accordance with 100BASE-T/100BASE-TX standard with copper UTP Cat5 cables with RJ45 connectors.
- 2.5.10 Network interface pairs on the client equipment used for connection to the Technical center equipment should have trunking configured (IEEE 802.1q) for redundancy (LACP, IEEE 802.3AX/IEEE 802.3ad). If only 1 port is used for UAT connection, it should have trunking (IEEE 802.1q) configured.
- 2.5.11 Bandwidth and duplex port mode on the Client equipment should be set to 100-full for 1 Gbit/s connections with bandwidth limited to 100 Mbit/s or "auto" – otherwise.
- 2.5.12 Number of IP/MAC addresses per port on the Technical Center equipment should not exceed limits set for ordered connection service.
- 2.5.13 Level of broadcast traffic received from the Client equipment should not exceed 2 Mbit/s.
- 2.5.14 The Technical center provides separate private range /24 networks for each Client for internal use (RFC 1918) which should be used for specific services.
- 2.5.15 For each connection the Technical Centre sends and receives traffic to/from specific IP-addresses allocated for the Client for provision of specific services, if such IP-addresses have been enabled for the Client to be used to access UAT.
- 2.5.16 IP addresses are provided by the Technical Center as part of the relevant connection services. To receive IP addresses and network configuration the Client should fill out IP address allocation request as shown in Annex #9. When issuing IP addresses the Technical Center provides necessary information required to configure the VLANs, subnet masks, broadcast network addresses (if

applicable).

2.6 Network equipment connection to production and game systems network segments.

- 2.6.1 Client network equipment is connected to Production and game systems network segments via the Technical Center's equipment using 10 Gbit/s ports.
- 2.6.2 Network equipment connection to the Technical Center is done by pair of ports (two ports for each connection). On the Technical Center side each pair of ports is allocated on two different network devices. On the client side it is recommended to terminate each link to different network devices, however having 2 links connected to a single network device is also allowed.
- 2.6.3 The Client's server equipment is connected to the Technical Center with cables supplied by the Technical Center. Interim equipment and cables from Clients are not allowed.
- 2.6.4 SFP modules (if needed) for Technical center-side connections are provided by the Technical center, for Client-side connections are provided by the Client.
- 2.6.5 Connections to 10 Gbit/s ports on the Technical Center equipment are done in accordance with 10GBASE-SR standard with double multimode fiber cables with LC-LC connectors and 10GBASE-SR modules on the Technical center side. 10GBASE-SR network interfaces with SFP+ or QSFP connectors, or a module adapter for SFP+ are allowed on the client's site.
- 2.6.6 Network interfaces on the Client equipment used for connection to the Technical center should be configured in L3 mode.
- 2.6.7 Bandwidth and duplex port mode on the Client equipment should be set to "auto".
- 2.6.8 Number of IP/MAC addresses per port on the Technical Center equipment should not exceed limits set for ordered connection service.
- 2.6.9 IP addresses and transit network settings are provided by the Technical Center.
- 2.6.10 Client network equipment used for connection to the Technical center should support BGP.
- 2.6.11 The Technical center uses BGP dynamic routing for all client-facing L3 connections. Use of other dynamic routing protocols as well as use of static routing is not possible.
- 2.6.12 To configure its connection the Client should use network settings provided by the Technical Center: BGP timings, Technical Centre AS number, AS number used by the Client for private use should be from AS64512-AS65534 range. Upon request and subject to additional approval, the Client is allowed to use its own public AS number.
- 2.6.13 The Technical center provides separate private range /24 networks for each Client for internal use (RFC 1918) which should be used for specific services.
- 2.6.14 For each Client network equipment connection the Technical center accepts of the network segments prefixes from /32 to /24 from allocated to the Client network segment ranges.
- 2.6.15 For each connection the Technical Centre sends and receives traffic to/from specific IP-addresses allocated for the Client for provision of specific services, if such IP addresses have been enabled for the Client to be used to access production and game systems network segments and which are announced for this connection by the Client network equipment.
- 2.6.16 It is possible to use administrative methods of route extension to set preferred route selection between different Client connections.
- 2.6.17 The Client is allowed to use IP addresses from address space reserved (but not allocated) for him without additional Technical Center notification. In this case the Technical Center will not accept and send traffic from/to these addresses.
- 2.6.18 If the Client uses overlapping IP ranges for his network equipment and server equipment connections, the absolute priority for inbound and outbound traffic from/to specific IP addresses will be set for network equipment connection if this network equipment announces this IP address within /24 to /32 length prefix, otherwise the priority will be set for the server connection.
- 2.6.19 If the Client uses overlapping IP ranges for different network equipment connections the absolute priority for inbound and outbound traffic from/to specific IP address will be set for network

equipment announcing this IP address within narrower prefix.

- 2.6.20 To receive multicast service the Client equipment should support PIM.
- 2.6.21 Client network equipment facing the Technical center equipment should have LLDP protocol enabled (if technically possible).
- 2.6.22 Client network equipment facing the Technical center equipment should have BFD protocol enabled (if technically possible).

2.7 Network equipment connection to the Internet.

- 2.7.1 Client network equipment is connected to the Internet-facing network through the Technical Center's equipment with 1 Gbit/s or 10 Gbit/s ports.
- 2.7.2 Network equipment connection to the Technical Center is done by pair of ports (two ports for each connection). On the Technical Center side each pair of ports is allocated on two different network devices. On the client side it is recommended to terminate each link to different network devices, however having 2 links connected to a single network device is also allowed.
- 2.7.3 The Client's server equipment is connected to the Technical Center with cables supplied by the Technical Center. Interim equipment and cables from Clients are not allowed.
- 2.7.4 SFP modules (if needed) for Technical center-side connections are provided by the Technical center, for Client-side connections are provided by the Client.
- 2.7.5 Connections to 10 Gbit/s ports on the Technical Center equipment are done in accordance with 10GBASE-SR standard with double multimode fiber cables with LC-LC connectors and 10GBASE-SR modules on the Technical center side. 10GBASE-SR network interfaces with SFP+ or QSFP connectors, or a module adapter for SFP+ are allowed on the client's site.
- 2.7.6 Connections to 1 Gbit/s ports on the Technical Center equipment are done in accordance with 1000BASE-T/1000BASE-TX standard with copper UTP Cat5e/Cat6 cables with RJ45 connectors. 1000BASE-T network interfaces with RJ45 connectors, or SFP are allowed on the client's site.
- 2.7.7 Network interfaces on the Client equipment used for connection to the Technical center should be configured in L3 mode.
- 2.7.8 Bandwidth and duplex port mode on the Client equipment should be set to "auto".
- 2.7.9 Number of IP/MAC addresses per port on the Technical Center equipment should not exceed limits set for ordered connection service.
- 2.7.10 IP addresses and transit network settings are provided by the Technical Center.
- 2.7.11 Client network equipment used for connection to the Technical center should support BGP.
- 2.7.12 The Technical center uses BGP dynamic routing for all client-facing L3 connections. Use of other dynamic routing protocols as well as use of static routing is not possible.
- 2.7.13 To configure its connection the Client should use network settings provided by the Technical Center: BGP timings, Technical Centre AS number, AS number used by the Client for private use should be from AS64512-AS65534 range. Upon request and subject to additional approval, the Client is allowed to use its own public AS number.
- 2.7.14 The Technical center provides separate private range /24 networks for each Client for internal use (RFC 1918) which should be used for specific services.
- 2.7.15 For each Client network equipment connection the Technical center accepts the network segments prefixes from /32 to /24 from allocated to the Client network segment ranges.
- 2.7.16 For each connection the Technical Centre sends and receives traffic to/from specific IP-addresses allocated for the Client for provision of specific services, if such IP addresses have been enabled for the Client to be used to access Internet network segments and which are announced for this connection by the Client network equipment.
- 2.7.17 It is possible to use administrative methods of route extension to set preferred route selection between different Client connections.
- 2.7.18 The Client is allowed to use IP addresses from address space reserved (but not allocated) for him without additional Technical Center notification. In this case the Technical Center will not accept and send traffic from/to these addresses.

- 2.7.19 If the Client uses overlapping IP ranges for his network equipment and server equipment connections, the absolute priority for inbound and outbound traffic from/to specific IP addresses will be set for network equipment connection if this network equipment announces this IP address within /24 to /32 length prefix, otherwise the priority will be set for the server connection.
- 2.7.20 If the Client uses overlapping IP ranges for different network equipment connections the absolute priority for inbound and outbound traffic from/to specific IP address will be set for network equipment announcing this IP address within narrower prefix.
- 2.7.21 IP addresses are provided by the Technical Center as part of the relevant connection services. To receive IP addresses and network configuration the Client should fill out IP address allocation request as shown in Annex #8. When issuing IP addresses the Technical Center provides necessary information required to configure the VLANs, subnet masks, broadcast network address and default route (if applicable).
- 2.7.22 Network connection between the Client equipment and the Internet is secured by the Technical center firewalls in accordance with configuration requested by the Client which is approved by the Technical Center.
- 2.7.23 Network policies allowing inbound connections from Internet to the Client equipment using most broadly used protocols (22/tcp, 23/tcp, 3389/tcp), and for independent client control modules – additional standard protocols (80/tcp, 443/tcp, 5900/tcp) are only allowed for limited white-listed Internet IP addresses.
- 2.7.24 Client network equipment facing the Technical center equipment should have LLDP protocol enabled (if technically possible).
- 2.7.25 Client network equipment facing the Technical center equipment should have BFD protocol enabled (if technically possible).

2.8 Network equipment connection to UAT network segments.

- 2.8.1 Client network equipment is connected to Production and game systems network segments using 10 Gbit/s ports at 10 Gbit/s or 1 Gbit/s on the Technical Center network equipment.
- 2.8.2 Network equipment connection to the Technical Center is recommended to be done by pair of ports (two ports for each connection). It is also possible to connect to UAT using only one port. If the connection is done using pair of ports, each pair of ports on the Technical Center is allocated on two different network devices. On the client side it is recommended to terminate each link to different network devices, however having 2 links connected to a single network device is also allowed.
- 2.8.3 The Client's server equipment is connected to the Technical Center with cables supplied by the Technical Center. Interim equipment and cables from Clients are not allowed.
- 2.8.4 SFP modules (if needed) for Technical center-side connections are provided by the Technical center, for Client-side connections are provided by the Client.
- 2.8.5 Connections to 10 Gbit/s ports on the Technical Center equipment are done in accordance with 10GBASE-SR standard with double multimode fiber cables with LC-LC connectors and 10GBASE-SR modules on the Technical center side. 10GBASE-SR network interfaces with SFP+ or QSFP connectors, or a module adapter for SFP+ are allowed on the client's site.
- 2.8.6 Connections to 1 Gbit/s ports on the Technical Center equipment are done in accordance with 1000BASE-SX/1000BASE-LX standard with double multimode fiber cables with LC-LC connectors and 1000BASE-SX or 1000 BASE LX/LH modules as chosen by the Technical Center.
- 2.8.7 Network interfaces on the Client equipment used for connection to the Technical center should be configured in L3 mode.
- 2.8.8 Bandwidth and duplex port mode on the Client equipment should be set to "auto".
- 2.8.9 Number of IP/MAC addresses per port on the Technical Center equipment should not exceed limits set for ordered connection service.
- 2.8.10 IP addresses and transit network settings are provided by the Technical Center.
- 2.8.11 Client network equipment used for connection to the Technical center should support BGP.

- 2.8.12 The Technical center uses BGP dynamic routing for all client-facing L3 connections. Use of other dynamic routing protocols as well as use of static routing is not possible.
- 2.8.13 To configure its connection the Client should use network settings provided by the Technical Center: BGP timings, Technical Centre AS number, AS number used by the Client for private use should be from AS64512-AS65534 range. Upon request and subject to additional approval, the Client is allowed to use its own public AS number.
- 2.8.14 The Technical center provides separate private range /24 networks for each Client for internal use (RFC 1918) which should be used for specific services.
- 2.8.15 For each Client network equipment connection the Technical center accepts the network segments prefixes from /32 to /24 from allocated to the Client network segment ranges.
- 2.8.16 For each connection the Technical Centre sends and receives traffic to/from specific IP-addresses allocated for the Client for provision of specific services, if such IP addresses have been enabled for the Client to be used to access UAT network segments and which are announced for this connection by the Client network equipment.
- 2.8.17 It is possible to use administrative methods of route extension to set preferred route selection between different Client connections.
- 2.8.18 The Client is allowed to use IP addresses from address space reserved (but not allocated) for him without additional Technical Center notification. In this case the Technical Center will not accept and send traffic from/to these addresses.
- 2.8.19 If the Client uses overlapping IP ranges for his network equipment and server equipment connections, the absolute priority for inbound and outbound traffic from/to specific IP addresses will be set for network equipment connection if this network equipment announces this IP address within /24 to /32 length prefix, otherwise the priority will be set for the server connection.
- 2.8.20 If the Client uses overlapping IP ranges for different network equipment connections the absolute priority for inbound and outbound traffic from/to specific IP address will be set for network equipment announcing this IP address within narrower prefix.
- 2.8.21 To receive multicast service the Client equipment should support PIM.
- 2.8.22 Client network equipment facing the Technical center equipment should have LLDP protocol enabled (if technically possible).
- 2.8.23 Client network equipment facing the Technical center equipment should have BFD protocol enabled (if technically possible).
- 2.8.24 To receive multicast service the Client equipment should support PIM.

2.9 Provision of structured cable systems

- 2.9.1 Provision of cross-connections between the Client equipment and authorized provider network equipment.
 - 2.9.1.1 Connections of the client equipment located in colocation facility to network provider equipment are organized by the Technical Center as per the Client request of the corresponding service. The service is a subject of confirmation from the network service provider.
 - 2.9.1.2 Authorized provider equipment is installed within special telco dedicated cabinets within colocation facility (MMR).
 - 2.9.1.3 The Technical center provides the list of authorized providers having presence within Colocation Facility.
 - 2.9.1.4 To arrange a x-connect to the authorized service provider equipment the Client should order corresponding service under the colocation contract and submit a x-connect request in the form specified in Appendix #8. The x-connect request should contain sufficient information to identify the Client equipment and port on it to terminate the x-connect into.
 - 2.9.1.5 The Technical center provides the x-connect between the Client equipment and the authorized telco provider after receiving proper LOA containing equipment identification details and specific port to terminate the x-connect into as well as additional information: cable type, bandwidth, etc.

- 2.9.1.6 The Technical center, at its own discretion, provides the x-connect between the Client equipment and the authorized telco provider using its own technical means including patch cords, cables, patch panels, cable trays, etc.
- 2.9.2 Cross-connect provision between 2 pieces of the Client equipment (not including cases when both pieces are located within the same Client cabinet) could be one of the following:
- Between two pieces of the Client equipment located in different Client's cabinets;
 - Between two pieces of the Client equipment one of which is located within the shared cabinet;
 - Between two pieces of the Client equipment both of which are located within the shared cabinet.
- 2.9.2.1 Connections between pieces of the Client equipment are organized by the Technical Center as per the Client request of the corresponding service.
- 2.9.2.2 To arrange a x-connect to the authorized service provider equipment the Client should order corresponding service under the colocation contract and submit a x-connect request in the form specified in Appendix #5. The x-connect request should contain sufficient information to identify the Client equipment and port on it to terminate the x-connect into.
- 2.9.2.3 The Technical center, at its own discretion, provides the x-connect between the Client equipment and the authorized telco provider using its own technical means including patch cords, cables, patch panels, cable trays, etc.
- 2.9.3 Provision of cross-connections between different clients' equipment.
- 2.9.3.1 Cross-connections between Client's equipment (Client who initiates the connection) and another Client equipment (Client who accepts the connection) are done by the Technical Center as per the corresponding service request by the Client who initiates the connection and after the corresponding consent is received from the Client who accepts the connection.
- 2.9.3.2 To arrange a x-connect to the authorized service provider equipment the Client who initiates the connection should order corresponding service under the colocation contract and submit a x-connect request in the form specified in Appendix #6. The x-connect request should contain sufficient information to identify the Client equipment and port on it to terminate the x-connect into.
- 2.9.3.3 The Technical Center provides the cross-connect between the Client who initiates the connection and the Client who accepts the connection as soon as the corresponding consent is received from the Client who accepts the connection in accordance with the form specified in Appendix 7. The x-connect consent should contain sufficient information to identify the Client equipment and port on it to terminate the x-connect into.
- 2.9.3.4 The Technical center, at its own discretion, provides the x-connect between the Client equipment and the authorized telco provider using its own technical means including patch cords, cables, patch panels, cable trays, etc.

3. Works and maintenance in Colocation Facility

3.1 Works with equipment in Colocation Facility

- 3.1.1 If possible, all equipment maintenance in colocation facility should be done remotely using network access or remote hardware administration systems.
- 3.1.2 If remote maintenance is not possible, physical access to equipment should be planned to take minimum time.
- 3.1.3 If planned maintenance requires a long time/large scope of jobs (exceeding 4 hours) with physical access to equipment, the equipment should be de-cabineted and taken out of the colocation facility and returned and installed into the cabinet once the maintenance is complete.

3.2 Physical access to equipment

- 3.2.1 For colocation in dedicated cabinet(s), the client representatives are allowed to access the cabinet(s) in colocation facility (no more than 3 representatives as a time) accompanied by the Technical Center engineer on duty.
- 3.2.2 For colocation in a shared cabinet (per-unit colocation) direct cabinet access into colocation facility is restricted and access to the client equipment is provided in the Client Room.

3.3 Equipment de-racking/installation and cabling

- 3.3.1 For colocation in dedicated cabinet(s), all installation/de-racking of the client equipment and network cabling within the cabinet is done by the Client's representatives or the Technical Center engineer upon the Client's request. The Technical center reserves the right to refuse specific installation/de-racking operations without Client's representatives presence in case proper equipment cabling/installation diagram is not provided by the Client and/or Client's cables are improper.
- 3.3.2 For colocation in a shared cabinet (per-unit colocation), all installation/de-racking as well as network cabling of the client equipment is done by the Technical Center engineer upon the Client's request.
- 3.3.3 For colocation in dedicated cabinet(s) the Client is obligated to keep the cabling/installation map of his equipment in its actual state.
- 3.3.4 In case the liquid cooling equipment is used the Client should provide its complete specification to the Technical center for approval beforehand and in case the approval is received, the Client must abide installation and Technical conditions of equipment operation provided by the Technical Centre.
- 3.3.5 For colocation in dedicated cabinet(s) the Client should notify the Technical Center about any changes in equipment location within the Client's cabinet after the maintenance is completed.
- 3.3.6 Equipment connection to PDUs, including connection to ground/neutral ground buses is performed by the Technical Center representatives only.
- 3.3.7 Organization of cross-connects to any Technical Center equipment, including patch panels, as well as the organization of any cross-connects outside of the Client cabinets are performed by the Technical Center representatives only.

3.4 Access to equipment in the Client Room

- 3.4.1 In order to access the Client equipment, the Client should submit a request. The Technical Center engineer de-racks the equipment and delivers it to the Client Room where it can be plugged in to the mains if necessary. The Client should specify preferred way to power off the equipment in its Data center visit request (as specified in Appendix 2). If preferred way to power off the equipment is not specified, the equipment is powered off at the discretion of the Technical Center Representative. The Client is fully responsible for any equipment malfunction/damage in this case.
- 3.4.2 In the Client Room the following is provided: place for equipment, power supply, screen/keyboard, wire/wireless Internet access, manual tools.
- 3.4.3 For equipment co-located in shared cabinets, once the maintenance is complete the Technical Center engineer places equipment into the cabinet, does necessary cabling and plugs the equipment into the mains in accordance with the cabling setup used before the equipment has been de-racked.
- 3.4.4 For equipment co-located in dedicated cabinets, once the maintenance is complete, per the Clients request the equipment is installed into the cabinet by the Client or his representatives, and is cabled and powered on by the Technical Center Representatives.

3.5 Timing of works

- 3.5.1 Moscow Exchange colocation facility sets the following time intervals:
- Trade hours (main trade session of the Moscow Exchange) — from 08:00 to 24:00 MSK on

workdays (trade days);

- Non-trade hours — from 00:00 to 08:00 MSK on workdays (trade days) and from 00:00 to 24:00 on weekends and holidays;
- Maintenance interval — from 10:00 to 18:00 MSK on weekends and holidays (non-trade days);

3.5.2 Any maintenance in the colocation facility that requires physical access to client equipment is prohibited during trade hours, excluding the following tasks executed by the Technical center representatives:

- Visual equipment checks;
- Powering on/off the equipment, hard resets;
- Connection/disconnection of prepared patch cords into the network interfaces;
- Connection/disconnection of IP-KVM interfaces.

3.5.3 Equipment de-racking/installation, network cabling, network configuration changes and other jobs that require physical access to equipment in the colocation facility should be scheduled for non-trade hours. It is highly recommended to plan such jobs to be started at the beginning of maintenance interval.

3.5.4 In case such jobs cannot be performed during the maintenance interval, it can be scheduled for additional time interval upon approval by the Technical Center.

3.5.5 Equipment setup and changes in the Technical Center network segments that do not require physical access to the Client equipment should be scheduled for non-trade hours.

3.5.6 Additional time limits may be applied to maintenance works in the colocation facility due to the following reasons:

- Moscow Exchange performs trading on weekend or holidays;
- Moscow Exchange performs release, load or other testing (day of testing is equated to trade day);
- Moscow Exchange performs Trade System version updates or extensive maintenance of the Moscow Exchange network segment or of the colocation facility infrastructure – Moscow Exchange reserves the right to apply moratorium on any changes in the colocation area on the day of the event and several days prior to the event;
- State holidays;
- Any other reasons upon additional notification from colo@moex.com.

3.6 Approval, planning and coordination of setup and changes in the Client network equipment configuration

3.6.1 Setup and changes in configuration of the Client network equipment connected to the Technical Center network segments that may potentially affect the Technical Center network functionality should be approved by the Technical Center.

3.6.2 In order to approve the time and scope of such maintenance, the Client should submit a request and obtain approval from the Technical Center network specialists beforehand (at least 1 business day before the planned maintenance).

3.6.3 Depending on scope and complexity of works, the Technical Center reserves the right to request detailed documented plans of changes, to the point of specifying particular network equipment or individual ports configuration as well as postponing the maintenance to more suitable time interval.

3.6.4 If necessary (according to the Technical Center) the Client should contact and keep in touch with the Technical Center representatives in order to mutually coordinate the maintenance process.

3.6.5 Changes in client equipment configuration should be completed in good time before the markets open so that the Technical Center specialists could confirm that Moscow Exchange network performance is not affected.

3.7 Requesting the services of the Technical Center

- 3.7.1 In order to submit the service request, the Client should contact the Technical Center using technical support public contacts.
- 3.7.2 When ordering jobs that require physical access of the Technical Center representatives to the Client equipment, in order to avoid any possibility of incorrect equipment identification, it is required to specify equipment unique ID (equipment label).
- 3.7.3 For specific service requests the Technical Center may require additional information including:
- Client representative's full name;
 - Data center;
 - Equipment model;
 - Serial number;
 - Equipment ports and interfaces numbers;
 - Number(s) of rack(s) and/or unit(s);
 - IP-addresses, IP-protocol numbers, TCP/UDP port numbers, traffic direction;
 - Telco provider name(s);
 - Another client(s) name(s);
 - IP-address purpose;
 - Other information.
- 3.7.4 In order to avoid any possible mistakes, such information should be provided via an e-mail.
- 3.7.5 In order to provide technical service or provide specific confidential information, the Client representative submitting service request or visiting the Data Center should be properly authorized by the Technical Center.
- 3.7.6 Detailed description of authentication and authorization methods is provided in paragraph 3.9 «Client Authorization» of the present Rules and Conditions.
- 3.7.7 Some specific works require confirmation from another party, including:
- "Client equipment connection to authorized telco provider equipment" service requires notification from the telco provider when the link is ready specifying equipment label and connection port(s) number(s) (LOA);
 - Cross-connection to another Client's equipment requires written consent of the other party (official consent as specified in Appendix 6).
- Typical recommended service request forms and authorization letters are given in Appendixes 2-8 to the present Rules and Conditions:
- Appendix 1. Client authorisation form
 - Appendix 2. Data center visit request form
 - Appendix 3. Firewall rules change request form for Internet access to equipment
 - Appendix 4. Technical Center connection request form
 - Appendix 5. Cross-connect between the Client's own equipment request form
 - Appendix 6. Cross-connect between different clients' equipment request form
 - Appendix 7. Written consent form for cross-connect between different clients' equipment
 - Appendix 8. Cross-connect to authorized network service provider equipment request form
 - Appendix 9. IP address allocation request form
 - Appendix 10. IP-KVM request form

3.8 Data Center visits

- 3.8.1 In order to perform the planned maintenance that requires the Data Center visit during maintenance interval, the Client should submit a request using the form stated in Appendix 2 of the present Rules and Conditions before 16:00 MSK of current business day.
- 3.8.1.1 If the maintenance is planned for weekend or holiday – the data center visit request should be

- submitted no later than 16:00 MSK of the business day preceding the weekend or holiday.
- 3.8.2 Maintenance schedule and scope as well as visit timing should be approved and confirmed by the Technical Center.
- 3.8.3 The Client is prohibited from opening/closing the cabinet locks, in which the maintenance is approved by the Technical Center.
- 3.8.4 It is strictly prohibited to access cabinets in which the maintenance has not been approved by the Technical Center.
- 3.8.5 Attempts to access the data center systems, such as fire extinguishing systems, air-conditioning, power supply, lighting are strictly prohibited.
- 3.8.6 Access under the data hall false floor, into SCS trays, as well as equipment and SCS placed over the top of cabinets is strictly prohibited.
- 3.8.7 In order to access the Client's equipment, the Client representative should have authorization. Client representatives that do not have authorization should be accompanied and visually controlled by authorized Client representatives.
- 3.8.8 Upon the Data Center visit, the Client representative should submit his/her original official ID document with a photo.
- 3.8.9 Client representatives visiting the Data Center should have necessary skills to work with equipment, including: accident prevention and electrical equipment safe operation.
- 3.8.10 If the Client needs to use step-ladder, truck, mobile desk, manual tools, power outlets, monitor/keyboard set, or Internet access, he/his reps should contact the Technical Center representative.
- 3.8.11 The Technical Center reserves the right to refuse the visit and/or interrupt the visit due to the breach of the accident prevention policy, non-compliance with internal DC regulations, unauthorized access attempts or other unauthorized actions by the Client representatives, which may endanger functioning and security of the Data center.

3.9 Client authorization

- 3.9.1 In order to request technical service, receive confidential information or material assets (equipment) as well as access equipment to perform planned or emergency maintenance, client representatives should be authorized.
- 3.9.2 Client's and its reps' personal Data used for authentication, as well as the powers of attorney of the Client representatives are specified in the Client Authorization form (in the form of power of attorney), as specified in Appendix 1 to the present Rules and Conditions which should be signed by authorized Client representative in accordance with the law and the company constituent documents. The Client Authorization Form is provided in 2 hard copies to the Technical Center.
- 3.9.3 The Client Authorization Form shall be deemed accepted by the Technical Centre for use in client authentication and his trustees upon its signature by the Technical Center.
- 3.9.4 Client Authorization Forms are assigned unique numbers and can be executed at any time during the contract term, in this case, once the new Client Authorization Form version is signed, the previous Client Authorization Form becomes void.
- 3.9.5 The Technical Center accepts the following authorization methods:
- Requests received from the email address specified in the colocation agreement as primary contact email address;
 - Phone calls received from the phone number (according to Caller ID or the callback from the Technical Center) specified in the colocation agreement as primary contact phone number;
 - Requests from the person authorized by the Client acting in accordance with the Client Authorization Form (in power of attorney form) stated in Appendix 1 of the present Rules and Conditions - for actions to which the representative has been authorized by the Client.
- 3.9.6 In case of the authorized person's dismissal or appointment of a new authorized person by the Client, as well as in case of any change of Client information stated in the Client Authorization form,

the Client is obliged immediately to inform the Technical Center by contacting technical support and then no later than in three calendar days send an official note to the Technical Center to revoke the current Client Authorization Form and, if necessary, sign a new Client Authorization Form with the Technical Center (in two hard copies).

3.9.7

The Technical Center interacts with the Client on the following questions:

- Organizational matters;
- Technical questions/issues, requests for technical service;
- DC visits requests, requests for passes into the DC;
- Physical access to equipment;
- Bringing equipment into the DC;
- Equipment takeout from the DC;
- Paperwork signature.

Appendix 1. Client Authorization Form

**Client Authorization Form №
CONFIDENTIAL**
(power of attorney form)

Moscow

Client	_____
Technical Center	Moscow Exchange
Agreement	No ____/CL dated _____ 201__

1. Client emergency contact details

E-mail address for emergency text messages:	_____

2. Power of attorney

By signing this form the Client authorizes the following person to perform the following actions on behalf of the Client:

Full name	_____	
Passport number and validity dates	_____	
Email	_____	
Telephone number	_____	
Communication with the Technical Center on: (please tick accordingly)		
<input type="checkbox"/> Organizational matters	<input type="checkbox"/> Technical issues	
<input type="checkbox"/> DC visits requests	<input type="checkbox"/> Physical access to equipment	
<input type="checkbox"/> Bringing the Client's equipment in the DC	<input type="checkbox"/> Taking the equipment out of the DC	
Specimen signature of the authorized person	<i>(signature)</i>	

(to be completed individually for every person)

3. Period of validity

This Client Authorization Form (power of attorney) is valid for 1 (one) year since the date of signature or until termination of the colocation agreement, depending on what happens first.

On the date of this Authorization Form signature, the previous Authorization Form #____ dated _____ 201__, including its power of attorney is revoked and becomes void.

In witness thereof, this Client Authorization Form is signed by the authorized representative of the Client (the head of the legal entity or any other person duly authorised to do so in accordance with the law and the company's constituent documents).

By the Client:

By the Technical Center:

Signed

Signed

_____ 201_

_____ 201_

Appendix 2. Data center visit request form

Data center visit request

Please review and approve the scope of equipment maintenance located in the Data Center as per Colocation agreement N^o ____/____/CL as of «__» _____ 201_.

1. Date and time of visit.
2. Scope of work.
3. Expected time to complete.
4. Cabinet number or list of equipment (model, serial number).
5. Full name(s) of Client representative(s).
6. Vehicle mark and number (only if vehicle pass is required).
7. List of equipment (model, serial number) to be installed/brought.
8. List of equipment (model, serial number) to be taken out.
9. Request for additional service to be provided by the Technical Center (select appropriate)
 - De-cabinet equipment (specify) and deliver it to the Client Room:
 - By the time of the visit,
 - Upon client representatives' request during the visit;
 - If the equipment is requested to be de-cabineted:
 - Equipment will have already been powered down by the Client,
 - It should be powered down by button,
 - It should be powered down by pulling out the cables,
 - contact _____(specify contact person);
 - Prepare ports/connections (please specify);
 - Other (please specify).

Title

Full name

Contact details

Note: please submit this request to colo@moex.com from authorized Email address.

Appendix 3. Firewall rules change request form for Internet access to equipment

Firewall rules change request for Internet access to equipment

In accordance with colocation agreement №____/____/CL as of «__» _____ 201_ please make changes into the firewall rules for inbound/outbound (select appropriate) internet access as follows:

Add permissions:

Inbound/outbound traffic	IP address(es) in private network	Internet IP address(es)	List of protocols/ports

Remove existing permissions:

Inbound/outbound traffic	IP address(es) in private network	Internet IP address(es)	List of protocols/ports

Title

Full name

Contact details

Note: please submit this request to colo@moex.com from authorized Email address.

Appendix 4. Sample request for connection to the Technical Center’s equipment

Request for connection to the Technical Center’s equipment

Please connect to the Technical Center’s equipment under agreement No ____/CL dated _____201__.

Connection parameters:

Segment: productions and game; UAT network, Internet

L2/L3: _____

Equipment label: _____

Port name/number: _____

Title
Full name
Contact details

Note: please submit this request to colo@moex.com by using the authorized email address.

Appendix 5. Cross-connect between the Client's own equipment request form.

Cross-connect between the Client's own equipment request.

In accordance with colocation agreement # _____ as of "___" _____ 201__ please provide the cross connection between equipment of (Client name) within the Moscow Exchange colocation facility.

Cross connect parameters:

Type (copper, fiber, other params): _____

1)

Equipment label: _____

Port name/number: _____

Connector type: _____

2)

Equipment label: _____

Port name/number: _____

Connector type: _____

Title

Full name

Contact details

Note: please submit this request to colo@moex.com from authorized Email address.

Appendix 6. Cross-connect between different clients' equipment request form

Cross-connect request between different clients' equipment

*(this request should be provided by the Client who **initiates** the connection, i.e. the Client who orders the cross-connect service)*

In accordance with colocation agreement # _____ as of "___" _____ 201__ please provide the cross connection between equipment of (name of the Client who initiates the connection) and equipment of (name of the Client who accepts the connection) within the Moscow Exchange colocation facility.

Cross connection parameters:

Type (copper, fiber, other params): _____

From (name of the Client who initiates the connection)

Equipment label: _____

Port name/number: _____

Connector type: _____

**Only specified if dedicated cabinet is used.*

Cross-connect parameters for (name of the Client who accepts the connection) will be provided by (name of the Client who accepts the connection).

Title

Full name

Contact details

Note: please submit this request to colo@moex.com from authorized Email address.

Appendix 7. Consent form for cross-connect between different clients' equipment

*(this consent should be provided by the **counterparty** of the Client who initiates the connection, i.e. the Client who **accepts** the connection)*

Consent for cross-connect with another Client's equipment.

(name of the Client who accepts the connection) gives consent for cross-connection between equipment collocated as per agreement # _____ as of "___" _____ 201__ and (name of the Client who initiates the connection) equipment.

Cross connection parameters:

Type (copper, fiber, other params): _____

From (name of the Client who accepts the connection)

Equipment label: _____

Port name/number: _____

Connector type: _____

Cross-connect parameters for (name of the Client who initiates the connection) will be provided by (name of the Client who initiates the connection).

Title

Full name

Contact details

Note: please submit this request to colo@moex.com from authorized Email address.

Appendix 8. Authorized Network Service provider cross-connect request form

(provided by the Client who initiates the connection)

Cross-connection request

In accordance with colocation agreement # _____ as of "___" _____ 201__ please provide the cross connection between equipment of (name of the Client who initiates the connection) and equipment of (authorized network service provider name) within the Moscow Exchange colocation facility.

Cross connection parameters:

Type (copper, fiber, other params): _____

From (name of the Client who initiates the connection)

Equipment label: _____

Port name/number: _____

Connector type: _____

Cross-connect parameters for (authorized network service provider name) will be provided by (authorized network service provider name).

Title

Full name

Contact details

Note: please submit this request to colo@moex.com from authorized Email address.

Appendix 9. IP allocation request

In accordance with agreement #____/CL dated "__" _____ 201__, please allocate the following IP addresses:

(please leave appropriate)

Production and game systems network segment:

Order routing access:

Multicast (FAST) access for all markets:

Multicast (FAST) access for Equities market:

Multicast (FAST) access for FX market:

Multicast (FAST) access for Derivatives market:

FAST FullOrderLog service for Derivatives:

(for FAST access both FeedA and FeedB IP addresses should be specified)

UAT network segment:

Order routing access:

Multicast (FAST) access:

(for FAST access both FeedA and FeedB IP addresses should be specified)

Internet-facing network segment:

Internet access:

Internet access for mgmt interface:

Title

Full name

Contact details

Note: please submit this request to colo@moex.com from authorized Email address.

Appendix 10. IP-KVM request.

In accordance with agreement #____/CL dated "___" _____ 201____, please provide IP-KVM for the following equipment:

Equipment label:

Please allow also access to IP-KVM for the following addresses:

Title

Full name

Contact details

Note: please submit this request to colo@moex.com from authorized Email address.