

# HOSTING SERVICES SERVICE SCHEDULE

## Liquid Telecom Offices

Mauritius (Head Office) • Botswana • DRC • Kenya • Lesotho • Rwanda • South Africa • Tanzania • Uganda • Zambia • UAE • UK

Liquid Telecommunications South Africa (Pty) Ltd. Registered Address: 401 Old Pretoria Main Road, Halfway House, Midrand 1685. Company Reg. No. 2004/004619/07.

## 1. APPLICABILITY

This Service Schedule is applicable to the COF for the purchase of Hosting Services which has been signed by the Customer and Liquid Telecom.

## 2. DEFINITIONS

- 2.1. Terms used herein but not otherwise defined shall have the meanings ascribed to them in the Agreement.
- 2.2. For the purposes of this Service Schedule, the following expressions shall have the meanings given to them hereunder:
  - 2.2.1. **"Agreement"** means the Master Services Agreement ("MSA") signed by Liquid Telecom and the Customer in respect of the Services, and in the absence of such signed MSA, then the MSA referred to in the COF;
  - 2.2.2. **"Customer Order Form" or "COF"** means, as more fully defined in the Agreement, the form through which the Customer accepts a quotation for Hosting Services, or for any variation to Hosting Services, setting out the details of the Hosting Service requested such as quantities, fees, Service Levels and Charges payable;
  - 2.2.3. **"Colocation Service"** means the provision of area(s) or space(s) including but not limited to any cabinets, cages, suites or rooms as well as the associated power supply, heating, ventilation, air conditioning, physical security and associated Remote Hands Services;
  - 2.2.4. **"Colocation Site"** means the premises, owned or leased by Liquid Telecom, from where the Colocation Service and/or other Hosting Service is provided, where applicable;
  - 2.2.5. **"Customer Equipment"** means all equipment or wiring including but not limited to cabling or other tangible items owned, leased or otherwise under the control of the Customer and at that time installed, stored or located in the Colocation Site;
  - 2.2.6. **"Customer Equipment List"** means a list of all Customer Equipment installed in the Colocation Site;
  - 2.2.7. **"ECNS"** means Electronic Communications Network Service and shall have the meaning as ascribed to it in the Act;
  - 2.2.8. **"ECNS Licensee"** shall have the meaning as ascribed to it in the Act;
  - 2.2.9. **"Footprint"** means floor space in the Colocation Site sized to accommodate 1 x standard 19" wide Rack with a maximum depth of 1.2m;
  - 2.2.10. **"Hosting Services"** means the services as more fully described in clause 3;
  - 2.2.11. **"HVAC"** means heating, ventilation and air-conditioning;
  - 2.2.12. **"INX-ZA"** means an autonomous division of the Internet Service Providers' Association (ISPA) of South Africa, and operates the only completely community-run Internet exchange points in South Africa, including the Johannesburg Internet exchange (JINX) and the Cape Town Internet Exchange (CINX);
  - 2.2.13. **"LC APC"** means local connect angled physical contact connector;
  - 2.2.14. **"Liquid Telecom Property"** means any facilities, including but not limited to, Liquid Telecom Equipment or other property owned, leased or otherwise under the control of Liquid Telecom;
  - 2.2.15. **"Managed Storage"** means a shared data storage service provided by Liquid Telecom;

- 2.2.16. “**MMR**” means the Liquid Telecom Meet Me Room, located within the Colocation Site, where ECNS Licensees are able to physically connect to one another and exchange data without incurring local loop fees;
- 2.2.17. “**NeoCloud**” means a hosting service in which customers have the ability to self-provision and manage their virtual servers via a web interface;
- 2.2.18. “**NIC**” means network interface controller;
- 2.2.19. “**ODF**” means Optical Distribution Frame, which is a distribution frame which terminates cables and allows interconnections to be made in the MMR;
- 2.2.20. “**Planned Maintenance**” means any preventative, routine or scheduled maintenance which is performed with regard to the Service, the Colocation Site, the Network, the off-net Network or any component thereof, reasonably believed to be necessary in order to increase capacity or to prevent or remedy a defect which may affect the Customer's use of or access to the Services;
- 2.2.21. “**Power per kWh**” means the service option where the Customer shall be charged for actual power consumption per Rack or Footprint per kilo Watt hour;
- 2.2.22. “**Rack**” means a Liquid Telecom 4U rack, a Liquid Telecom half rack, a Liquid Telecom full rack, a Liquid Telecom half rack (Power per kWh) or a Liquid Telecom full rack (Power per kWh), as selected in the relevant COF;
- 2.2.23. “**Remote Hands Services**” is a technical service that provides a support service inside the Colocation Site that includes power recycling, basic trouble shooting and tape swaps, if required;
- 2.2.24. “**SDH**” means Synchronous Digital Hierarchy, which is an international standard for high speed telecommunication over optical and/or electrical networks;
- 2.2.25. “**SEACOM**” means SEACOM Limited, which owns and operates the submarine fibre-optic cable connecting communication carriers in South and East Africa;
- 2.2.26. “**SEACOM Room**” means the area demarcated specifically for SEACOM equipment and cross connections;
- 2.2.27. “**Service Credits**” means the credits due to the Customer for unscheduled Service Downtime calculated in accordance with clause 7;
- 2.2.28. “**Service Downtime**” means that period of time for which the Service was unavailable to the Customer;
- 2.2.29. “**Service Period**” means 60 minutes x 24 hours per day x number of days in current month;
- 2.2.30. “**Virtual Firewall**” means a firewall service wherein Liquid Telecom shall provide a virtual private firewall instance; and
- 2.2.31. “**Virtual Host**” means a hosting service in which multiple virtual servers are maintained on the same physical machine.

### 3. SERVICE DESCRIPTION

For purposes of this Service Schedule, the term “Services” or “Hosting Services” consists of the following, as more fully described below, to the extent set out in the relevant COF:

- 3.1. **Managed Host Services** include the following, to the extent selected in the relevant COF:
  - 3.1.1. Managed Storage;

- 3.1.2. Virtual Firewall; and
- 3.1.3. Burstable per Gigabyte Internet Access.
- 3.2. **Virtual Host and NeoCloud Services** allow customers to create and virtualised servers on Liquid Telecom owned physical server platforms; and
- 3.3. In terms of the **Colocation Service**, Liquid Telecom provides computer room floor space and/or racks including the appropriate power, cooling, fire protection, monitoring, security for the operation of the networking and compute equipment housed inside the facility.

#### 4. MANAGED HOSTING SERVICES

##### 4.1. Managed Storage

- 4.1.1. The Managed Storage Service provides a hard disk storage space solution that enables the Customer to store his data on Liquid Telecom's storage area network architecture.
- 4.1.2. The Customer shall provide the following information to Liquid Telecom with regard to the Managed Storage Service, which includes but is not limited to:
  - 4.1.2.1. Customer server hardware and operating system details;
  - 4.1.2.2. Type of storage disk required (e.g. SSD, SAS or NL-SAS);
  - 4.1.2.3. Storage capacity requirement per storage type;
  - 4.1.2.4. Type of Storage interface required (e.g. fibre channel, ethernet); and
  - 4.1.2.5. Storage breakup i.e. file-system details.
- 4.1.3. The Customer shall ensure that the following NIC/HBA specifications are installed for the Managed Storage Service:
  - 4.1.3.1. The server/s shall connect via two (2) separate host bus adaptors and one additional NIC;
  - 4.1.3.2. The specifications of the NIC shall be electrical Gigabit Ethernet or Fast Ethernet;
  - 4.1.3.3. Connector type should be RJ45 for electrical Fast Ethernet or Gigabit Ethernet; and
  - 4.1.3.4. The NIC must have the ability to support VLAN tagging.
- 4.1.4. Data storage shall be in accordance with the various data volume plans the Customer has subscribed for in the COF.
- 4.1.5. The Customer shall be responsible for the provision and maintenance of any Customer server hardware that is connected to the storage.

##### 4.2. Virtual Firewall

- 4.2.1. The Virtual Firewall service provides a 'stateful inspection' firewalling service on a multi-tenanted firewall system. Liquid Telecom will configure the specific rule base specified by the Customer on the platform.
- 4.2.2. In conjunction with Liquid Telecom's designated security specialist, the Customer shall specify the following Virtual Firewall security policy requirements:
  - 4.2.2.1. Build up inbound and outbound access lists for a Customer-specific firewall security policy; and
  - 4.2.2.2. Indicate whether Network Address Translation (NAT) is required.

#### 4.2.3. Virtual Firewall Service Options

The service options and their associated specifications offered for the Virtual Firewall Service are as follows:

- 4.2.3.1. Virtual Firewall Standard: 2 rule base and/or configuration changes per month;
- 4.2.3.2. Virtual Firewall Select: 4 rule base and/or configuration changes per month; and
- 4.2.3.3. Virtual Firewall Premium: Unlimited rule base and/or configuration changes per month.

#### 4.2.4. Virtual Firewall Rule Base

- 4.2.4.1. During the deployment process for Standard, Select, and Premium service options, Liquid Telecom shall work directly with the Customer's authorized security and deployment contacts to collect data required for Liquid Telecom to construct a customized security rule base tailored to the needs of the Customer.

#### 4.2.5. Rule Base and/or Configuration Changes

- 4.2.5.1. All rule base and/or configuration changes shall be completed in full by a Liquid Telecom Security Analyst. The Customer may request the number of changes to the firewall platform's security rule base or configuration per calendar month commensurate with the service level selected by the Customer, as specified in the relevant COF.
- 4.2.5.2. If the Customer requires changes to the security rule base or configuration, the Customer may submit a change request via e-mail.
- 4.2.5.3. A single (1) firewall rule base and/or configuration change is defined as any authorized request for the addition or modification of one (1) rule with five (5) or less network or IP object changes by a Liquid Telecom Security Analyst in a single request submission.
- 4.2.5.4. Any change request that requires the addition of six (6) or more network or IP objects or the manipulation of two (2) or more rules would be counted as two (2) or more requests.
- 4.2.5.5. If the request applies to changes outside of the rule base (firewall rules), each submitted request shall constitute a single change.
- 4.2.5.6. Each firewall module rule base change requires the following information:
  - 4.2.5.6.1. Description of the change;
  - 4.2.5.6.2. Source and destination IP addresses;
  - 4.2.5.6.3. Source and destination ports/services;
  - 4.2.5.6.4. Network address translation details (if applicable);
  - 4.2.5.6.5. Actions (block / accept); and
  - 4.2.5.6.6. Special instructions for those implementing the change.

#### 4.2.6. Rule Base and Configuration Change Maintenance Windows

- 4.2.6.1. By default, all firewall rule base and/or configuration changes shall be completed within a specific number of hours from change submission as defined in this Schedule. Select and Premium level Customers may optionally specify a specific time window for change implementation, or a reoccurring maintenance window

within which submitted changes shall be implemented. The options available include:

- 4.2.6.1.1. Specific Implementation Time – Upon the Customer’s request, Select and Premium level Customers may specify a specific time window for Liquid Telecom to implement a single rule base or configuration change. This implementation window shall fall outside of the contracted SLA timeframe for change implementation; and
- 4.2.6.1.2. Re-occurring Maintenance Window – Upon the Customer’s request, Select and Premium level Customers may specify a re-occurring maintenance window within which submitted rule base or configuration changes shall always be implemented.
- 4.2.6.2. Changes requested for a given Planned Maintenance window shall be submitted prior to the maintenance window start time in accordance with requirements set out in clause 14. Such a process ensures adequate time to process and review changes prior to the maintenance window. However Liquid Telecom is unable to guarantee completion of changes within a time period less than the allocated service window for unscheduled policy and/or configuration change requests.

#### 4.2.7. Emergency Change Requests

Liquid Telecom shall accommodate up to one (1) rule base or configuration change deemed an emergency by the Customer per Standard, Select and Premium level managed firewall under management during each calendar month of the Contract Term. The Customer shall submit their emergency change request via e-mail. During the electronic submission of the change request, the change must clearly be identified as an emergency. Following electronic submission, an authorized security contact shall place a follow-up phone call to Liquid Telecom and escalate the change submission to emergency status. Following telephone escalation, Liquid Telecom shall route the change request to the appropriate analyst and the change shall be implemented.

#### 4.2.8. Firewall Notifications and Alerts

The Managed Hosting security firewall has the capability for e-mails and/or SNMP (simple network management protocol) traps to be generated and sent from the device when certain firewall related events occur. Upon the Customer’s request, Liquid Telecom shall configure the firewall platform to generate SNMP traps or deliver e-mails to an address of the Customer’s choosing.

- 4.3. **Burstable Internet Access** is an optional service that provides internet access services with increased internet access speeds to Customers hosted inside one of Liquid Telecom’s Colocation Sites. Liquid Telecom will not rate limit the access speed of the Customer and will count the amount of data passing to and from the internet by the Customer. The Customer will be billed on a monthly basis depending on the volume of data accessed across this internet connection and the service tier selected by the Customer in the relevant COF.

### 5. VIRTUAL HOST AND NEOCLOUD SERVICES

- 5.1. The Service shall be provided as a virtual server offering which has a minimum of a 12 (twelve) month obligation.
- 5.2. All resources are multi-tenant capable and shared as part of the overall Virtual Host and/or NeoCloud Service infrastructure.

5.3. Equipment which includes but is not limited to server nodes, switches, storage devices and firewalls shall be shared across customers using the Virtual Host and/or NeoCloud Service.

**5.4. Virtual Host Service**

5.4.1. The Customer shall specify to the Liquid Telecom representative the exact sizing required for the Virtual Host Service package selected, which includes but is not limited to memory capacity, storage capacity, disaster recovery, number of multiple virtual appliances and network requirements.

5.4.2. The Customer shall not be permitted to change to another Virtual Host package within the Contract Term of the Service.

5.4.3. The Customer may upgrade by adding more storage, memory and/or other Virtual Host components, as required, which upgrades shall be subject to the written approval of Liquid Telecom.

**5.5. NeoCloud Service**

5.5.1. Liquid Telecom will provision the Customer access to the NeoCloud platform as well as connecting to any other network services procured.

5.5.2. The Customer will be responsible to create, manage and support all servers and internal network configurations on the NeoCloud platform.

5.6. Liquid Telecom shall not take responsibility for connectivity quality of the Service if the connectivity is provided by another service provider.

5.7. The Customer shall not have any right to title or interest in the software, hardware, documentation, or any copyrights used in the provisioning of the Services.

5.8. The Customer is solely responsible for the content of any posting, data or transmissions carried over Liquid Telecom Services, including but not limited to the security and backing up of the virtual server and or data.

5.9. The Service delivery process shall commence upon receipt of signed COF and any stipulated payments.

5.10. All Service operations, fulfilment and assurance shall be administered by the Liquid Telecom operations team.

**5.11. Customer Data**

5.11.1. The Customer will retain full right and title to all Data residing on the Virtual Host and/or NeoCloud server.

5.11.2. The Customer may extract and/or delete its Data from the Virtual Host and/or NeoCloud server at any time during the Contract Term of the Virtual Host and/or NeoCloud Service.

5.11.3. Upon expiry of the Contract Term for the Virtual Host and/or NeoCloud Service and receipt of written notification from the Customer to that effect in accordance with the terms of the Agreement, all Data contained on the Virtual Host and/or NeoCloud server will be deleted by Liquid Telecom.

5.11.4. Should the Customer wish to retain any Data on the Virtual Host and/or NeoCloud server following expiry of the Contract Term of the Virtual Host and/or NeoCloud Service, the Customer will be responsible for all storage and other applicable charges during such retention period.

5.11.5. The Customer agrees that Liquid Telecom shall have no additional obligation to continue to hold, export or return Data other than to the extent as set out in this clause.

## 6. COLOCATION SERVICE

- 6.1. The Customer hereby grants permission to Liquid Telecom to physically access all Racks in the Colocation Site to enable Liquid Telecom to conduct random hardware compliance audits to ensure that the Customer Equipment does not pose security risks or fire risks.
- 6.2. Any non-standard hosting requests shall be submitted to Liquid Telecom via the Customer's Liquid Telecom account manager who shall complete the necessary application.
- 6.3. Liquid Telecom shall consider applications for additional services, including but not limited to, additional power, roof top installations, out of band connections, GSM or GPS aerial installations, caged hosting and any other requests pertaining to non-standard hosting as defined by Liquid Telecom.
- 6.4. Liquid Telecom shall endeavour to perform environmental systems maintenance, power plant maintenance and other actions as are reasonably required to maintain the Colocation Service in good condition and suitable for the placement of communications and computer equipment.
- 6.5. Any changes to the Service implemented by Liquid Telecom within a calendar month shall be billed for on a pro-rata basis.
- 6.6. Liquid Telecom reserves the right to verify the installation of Customer Equipment listed on the Customer Equipment List.
- 6.7. All Customer Equipment installed in terms of the Colocation Service shall be required to have dual network cards and dual power supplies.
- 6.8. Liquid Telecom may provide the Customer cross connection services upon request for an additional fee to be specified in the COF. The Customer is not permitted to conduct its own cross connections to other customer cabinets or anywhere else within the Colocation Site under any circumstances.
- 6.9. ECNS Licensee to ECNS Licensee Cross Connect in the MMR
  - 6.9.1. Rule Set 1 - trunk, backbone or core connectivity to Customer Equipment.
    - 6.9.1.1. All trunk connectivity from third party fibre optic cable providers entering the Liquid Telecom facilities shall terminate in the Liquid Telecom fibre splice room.
    - 6.9.1.2. Liquid Telecom shall splice the required number of fibre pairs in the splice room and facilitate a connection to the ODF in the MMR.
    - 6.9.1.3. All fibre cross connections between the incoming fibre and the Rack inside the MMR shall take place on the ODF.
    - 6.9.1.4. The ECNS Licensee shall be required to supply a patch lead to connect its transmission equipment to Liquid Telecom's ODF and shall ensure that this patch lead at the ODF side is LC APC with a minimum length of fifteen (15) metres.
    - 6.9.1.5. Only Liquid Telecom shall terminate services inside the Liquid Telecom Colocation Site/s, in which case the applicable last mile connect service fee shall be applicable.
  - 6.9.2. Rule Set 2 - ECNS Licensees requiring local cross connect in the MMR
    - 6.9.2.1. All cross connections between ECNS Licensees shall take place on the ODF in the MMR.
    - 6.9.2.2. When cross connecting to ECNS Licensees on SDH or ethernet cross connections, the applicable cross connect fee contained in the COF applies.



- 6.9.2.3. The ECNS Licensee shall be required to supply a patch lead to connect its transmission equipment to Liquid Telecom's ODF and shall ensure that this patch lead at the ODF side is LC APC with a minimum length of fifteen (15) metres.
- 6.9.2.4. Only Liquid Telecom shall terminate services inside the Liquid Telecom Colocation Site/s, in which case the applicable last mile connect service fee shall be applicable.
- 6.9.2.5. Both ECNS Licensees are required to have Rack space in the MMR for this service element to be applicable.

## 6.10. Cross-Connection

### 6.10.1. The Cross-Connect Service includes:

- 6.10.1.1. Providing fibre connection from the SEACOM Room to the MMR for end customers;
- 6.10.1.2. Integrating cross connection at SEACOM equipment;
- 6.10.1.3. Providing cross connection between ECNS Licensees located in the MMR; and
- 6.10.1.4. Providing cross connection between INX-ZA and Customers located in the MMR:
  - 6.10.1.4.1. All cross connection with INX-ZA shall take place on the ODF in the MMR.
  - 6.10.1.4.2. When cross connecting with INX-ZA, the applicable once-off cross connect fee contained in the COF shall apply.
  - 6.10.1.4.3. The Customer shall be required to supply the port that the Customer has been allocated by INX-ZA, which the Customer shall order and obtain such port directly from INX-ZA.
  - 6.10.1.4.4. The Customer is required to have Rack space in the MMR for this service element to be applicable.
  - 6.10.1.4.5. The Customer shall liaise directly with INX-ZA regarding all queries related to any business of the internet exchange point and acknowledges that Liquid Telecom shall not be in a position to provide support for INX-ZA related services, except for the cross connect with INX-ZA in the MMR.
  - 6.10.1.4.6. The Customer acknowledges that Liquid Telecom shall provide the cross connect with INX-ZA service to the Customer for as long as INX-ZA is located in the Liquid Telecom Property.

### 6.10.2. All cross connections shall be managed by Liquid Telecom.

## 6.11. Meet Me Room:

- 6.11.1. The MMR facilitates the Network cross connection of various telecommunications carrier networks and offers direct connections to the SEACOM undersea cable system.
- 6.11.2. The Colocation Service is 'carrier neutral', which means that any customers who contract for Managed Hosting Services from Liquid Telecom may request a third party access link to be provided. Cross connect charges shall apply.
- 6.11.3. ECNS Licensees may, on request, acquire cross connections only to other ECNS licensees.
- 6.11.4. ECNS Licensees with infrastructure shall be allowed to interconnect to other ECNS Licensees with infrastructure who are also located inside the MMR.

## 6.12. Remote Hands Services:

- 6.12.1. Liquid Telecom may perform “remote hands” maintenance services on the Customer Equipment within the ambit of the Colocation Service.
- 6.12.2. The Remote Hands Service is included in the monthly recurring charge for a limited number of hours per month.
- 6.12.3. The Remote Hands Services provided by Liquid Telecom are as follows:
  - 6.12.3.1. power cycle a router, server, switch, or soft boot a server;
  - 6.12.3.2. move or secure a cable;
  - 6.12.3.3. switch a toggle or series of toggles;
  - 6.12.3.4. push a button or series of buttons;
  - 6.12.3.5. verify, add, remove or change a demarcation label;
  - 6.12.3.6. relay status and alarm LED’s on equipment;
  - 6.12.3.7. equipment inventory;
  - 6.12.3.8. label a piece of equipment or cable connection.
- 6.12.4. Liquid Telecom shall not be responsible for upgrades, repairs, configuration or tuning, or for installation of, the Customer Equipment.

#### 6.13. Access and Use

- 6.13.1. The Customer shall be permitted access to the Colocation Site subject to any and all rules, regulations and access requirements imposed by Liquid Telecom governing such access, as amended from time to time.
- 6.13.2. The Customer shall use the Colocation Service only for placement and maintenance of telecommunications or computer equipment. Such equipment may be interconnected to other Liquid Telecom Service(s) or, with the prior written permission of Liquid Telecom, cross-connected to the facilities of other ECNS Licensees, subject to the applicable ECNS Licensee/s' terms and conditions.
- 6.13.3. The Customer shall maintain the Colocation Site in a clean, orderly and safe condition.
- 6.13.4. The Customer shall return the Colocation Site to Liquid Telecom at the conclusion of the Contract Term of the Colocation Service in the same condition as it was at the commencement of the Colocation Service, with reasonable wear and tear excepted.
- 6.13.5. The Customer agrees to accept the Colocation Site in the condition it is handed to them by Liquid Telecom.
- 6.13.6. The Customer shall abide by all rules relating to use of, access to, or security measures relating to the Colocation Service and/or the Colocation Site, as may be amended by Liquid Telecom from time to time.
- 6.13.7. The Customer shall be liable for all theft and/or damage caused to any property on the Colocation Site whether caused by its employees, its agents or any person that the Customer knowingly or unknowingly permits entry to the Colocation Site.
- 6.13.8. Any Liquid Telecom Equipment provided as part of the Colocation Service shall remain the property of Liquid Telecom at all times.
- 6.13.9. In addition to the termination rights set forth in the Agreement, Liquid Telecom shall have the right to terminate the Customer’s use of the Colocation Service in the event that:

- 6.13.9.1. Liquid Telecom's right to use the Colocation Site terminates or expires for any reasons (other than due to the fault or negligence of Liquid Telecom); or
- 6.13.9.2. the Customer makes any material alterations to the Colocation Service and/or the Colocation Site without first obtaining written consent of Liquid Telecom; or
- 6.13.9.3. the Customer allows personnel or contractors who have not been approved by Liquid Telecom in writing in advance to enter the Colocation Site, which approval can be revoked by Liquid Telecom at any time in its sole discretion; or
- 6.13.9.4. The Customer violates any rules relating to use of, access to, or security measures relating to the Colocation Service and/or the Colocation Site.
- 6.13.9.5. With respect to clauses 6.13.9.3 and 6.13.9.4 above, unless same interferes with, or has the potential to interfere with other customers of Liquid Telecom, Liquid Telecom shall provide the Customer a written notice of the foregoing and ten (10) days to remedy same before terminating the Customer's rights to the Colocation Service.

#### 6.14. Customer's Responsibilities

- 6.14.1. The Customer is required to install Customer Equipment in the Rack provided within 2 (two) weeks following receipt of the Service Handover Form from Liquid Telecom.
- 6.14.2. The Customer shall take all actions required to ensure that the Customer's server system accessing the Services is virus free at all times.
- 6.14.3. The Customer shall be responsible for all firewalling and security patching.
- 6.14.4. The Customer shall be responsible for all internal Rack switching within the Colocation Site and/or the MMR.
- 6.14.5. The Customer shall notify Liquid Telecom in writing before execution of any work on the systems and/or equipment located within the Colocation Site and/or the MMR.
- 6.14.6. The Customer shall be responsible for the insurance of all Customer Equipment.
- 6.14.7. The Customer shall not use unauthorized wireless or any other connectivity means to interconnect with Customer networks in the Colocation Site. Failure to comply may result in the relevant hosting Service being immediately disabled.
- 6.14.8. The Customer shall engineer, furnish, install and test, at its own expense, all Customer Equipment used in the Colocation Service.
- 6.14.9. Prior to installation, the Customer shall submit to Liquid Telecom, for its approval, all engineering plans and specifications pertaining to Customer Equipment to be installed.
- 6.14.10. The Customer shall use reasonable care in installing and maintaining the Customer Equipment and shall fully reimburse and indemnify Liquid Telecom against any loss, damage, theft, or destruction of the Colocation Site or any Liquid Telecom Property located therein arising from the actions or omissions of the Customer.
- 6.14.11. The Customer shall furnish and keep current a Customer Equipment List as a means for Liquid Telecom to identify all Customer Equipment installed in the Colocation Site. The Customer shall provide to Liquid Telecom the Customer Equipment List after installation of Customer Equipment and shall maintain a current list with Liquid Telecom as changes occur.
- 6.14.12. The Customer shall only be entitled to remove Customer Equipment that is listed on the existing Customer Equipment List from the Colocation Site.

- 6.14.13. The Customer shall not allow any third party, including but not limited to, vendor support engineers, to work on the Colocation Service systems unless accompanied or authorised by the Customer representative.
- 6.14.14. The Customer shall notify Liquid Telecom in writing before execution of any work of its authorized representatives.
- 6.14.15. All Customer Equipment installed in terms of the Colocation Service shall comply with all applicable laws, regulations and standards, including without limitation, those standards established by Liquid Telecom, and shall be maintained by the Customer in a manner so as to ensure continued compliance and to avoid hazard or damage to Liquid Telecom Property or injury to Liquid Telecom's employees, agents, suppliers, or to any third party.
- 6.14.16. Upon written notice from Liquid Telecom, the Customer shall eliminate any hazard, interference or service obstruction that any hardware or software used by the Customer, whether or not provided by Liquid Telecom is causing, or is likely to cause.
- 6.14.17. The Customer shall provide Liquid Telecom with no less than two (2) technical points of contact who shall be the contact persons between the Customer and Liquid Telecom in relation to the Colocation Service. Any changes to these technical points of contact shall be notified to Liquid Telecom in writing and shall be effective 24 (twentyfour) hours following receipt of the written notice.
- 6.14.18. The Customer shall be liable for all acts or omissions of personnel, subcontractors, or agents of the Customer who enter the Colocation Site and agrees to indemnify and hold Liquid Telecom harmless from any and all damages, losses and expenses arising from acts or omissions of those individuals.
- 6.14.19. The Customer shall not alter with, tamper, adjust or repair any Liquid Telecom Property and indemnifies and holds Liquid Telecom harmless from any and all damages, losses and expenses arising from such acts.
- 6.14.20. The Customer shall not erect signs or devices on exterior of the cabinets, cages, or make any construction changes or material alterations to the interior or external portions of the Colocation Site.
- 6.14.21. The Customer's employees, subcontractors and agents are prohibited from bringing into the Colocation Site any food, drink, wet cell batteries, explosives, flammable liquids or gases, alcohol, controlled substances, weapons, cameras, tape recorders, or similar equipment and materials that may damage or interfere with equipment within the Colocation Site.

## **7. GENERAL TERMS AND CONDITIONS**

- 7.1. In no event shall the Contract Term exceed the term of Liquid Telecom's rights to lease and/or utilise the Colocation Site. Any COF is expressly made subject and subordinate to the terms and conditions of any underlying ground or facilities lease or other superior right by which Liquid Telecom has an acquired interest in the Colocation Site.
- 7.2. Should the Customer, at the end of the Contract Term, fail to vacate the Colocation Site and return it in manner set out in 6.13.4 above, the Customer shall pay two hundred percent (200%) of the MRC for such period until the Colocation Site is returned in accordance with 6.13.4. Liquid Telecom shall further be entitled to deny the Customer and any agents or employees of the Customer access to the Colocation Site at the end of the Term.
- 7.3. The Customer undertakes and warrants it shall comply with the terms and conditions of all licences applicable to the hardware, firmware, software or any other feature installed and/or running in the

Colocation Sites, and/or installed on virtual servers provided by Liquid Telecom and which are utilised by Liquid Telecom to provide the Hosting Services.

- 7.4. The Customer hereby permits Liquid Telecom and/or any hardware or software provider of Liquid Telecom access to the Customer servers hosted with Liquid Telecom in order to conduct random compliance audits. The Customer agrees to fully cooperate with Liquid Telecom's internal or external auditors to ensure that the audits can be completed successfully, including but not limited to providing supervised access to Customer servers.
- 7.5. If there is a fluctuation in the exchange rate of the rand to a foreign currency, directly affecting the input costs of Liquid Telecom's services to the Customer, Liquid Telecom may adjust the Customer's charges based on the applicable fluctuation.
- 7.6. Changes in Location or Configuration
  - 7.6.1. Liquid Telecom reserves the right to change the location or configuration of the relevant Hosting Service and/or the Colocation Site, as the case may be.
  - 7.6.2. Liquid Telecom and the Customer shall work in good faith to minimise any disruption in the Customer's Services that may be caused by such changes in location or configuration.
- 7.7. Liability
  - 7.7.1. The Customer shall be liable to reimburse Liquid Telecom for
    - 7.7.1.1. all costs and expenses incurred by Liquid Telecom in replacing or repairing, as the case may be, any damage or destruction to Liquid Telecom Property caused by the Customer during its utilisation of the Hosting Service: and
    - 7.7.1.2. any fine, levy and/or penalty that is imposed on Liquid Telecom as a result of the failure by the Customer to comply with the terms in clause 7.3.
  - 7.7.2. Neither Liquid Telecom nor any of its officers, directors, employees or agents shall be liable for any damage or destruction of equipment or other tangible materials belonging to, leased by, or otherwise under the control of the Customer, whether or not any such equipment or materials are or were located in facilities owned or operated by Liquid Telecom, except where such damage or destruction is a direct result of the gross negligence or wilful misconduct of Liquid Telecom or any of its officers, directors, employees or agents.
- 7.8. Power Charges
  - 7.8.1. If, from time to time, Liquid Telecom incurs one or more increases in the cost of supplying electrical power to the Colocation Site, whether from increases in the unit cost of electrical power or diesel fuel increases, Liquid Telecom reserves the right to increase the monthly charges payable by the Customer to recover for the increases in electrical power supply costs.
  - 7.8.2. Liquid Telecom shall give written notice to Customer of the increases that will be passed to the Customer within 60 days after such additional charges for electrical have been applied to Liquid Telecom's input costs.

## 8. SERVICE LEVELS

- 8.1. Power Supply Availability: In the event that the Customer subscribes to both primary and secondary feeds in relation to the Colocation Service, as reflected in the COF, Liquid Telecom shall guarantee the availability of the electrical power supply ("Power Supply Availability") as set out below.
  - 8.1.1. Power System: The Power Supply Availability shall be determined by flow of electricity either on both the primary and secondary feeds or one of the feeds supplied to the Customer by

Liquid Telecom which serves the Colocation Site. In the event both the primary and secondary feeds fail concurrently, the Customer shall be entitled to the relevant Service Credits.

- 8.1.2. Power Supply Availability shall be measured by Liquid Telecom's Building Management System or other electrical metering device serving the Colocation Site.
- 8.2. HVAC Availability: Liquid Telecom shall guarantee the availability of the HVAC supply to the Colocation Site as set out below.
  - 8.2.1. Average room temperature of between 20 to 24 degrees Celsius on a daily basis under 100% Customer Equipment load condition; and
  - 8.2.2. Average room relative humidity from 40% to 60%.
- 8.3. Service Availability
  - 8.3.1. For Managed Storage, the storage array shall be measured at the availability of the disk storage array and having a monthly availability of 99.9%.
  - 8.3.2. For Virtual Host and NeoCloud Services, the minimum platform availability shall be 99.9%.
- 8.4. Service Credits
  - 8.4.1. If Service Availability fails to meet the stipulated target % for the Service in question in a given month, the Customer shall be entitled to request Service Credits calculated as follows:

SERVICE AVAILABILITY FOR POWER SUPPLY AND HVAC FOR COLOCATION SERVICES	SERVICE CREDIT (%MRC OF THE AFFECTED HOSTING SERVICE)
> 100%	No credit
> 99.994% but < 100%	5% of MRC
>99.992% but < 99.994%	10% of MRC
>99.985% but < 99.992%	15% of MRC
> 99.982% but < 99.985%	20% of MRC
< 99.982%	25% of MRC

SERVICE AVAILABILITY FOR MANAGED HOSTING, VIRTUAL HOST AND NEOCLOUD SERVICES	SERVICE CREDIT (%MRC OF THE AFFECTED HOSTING SERVICE)
> 100%	No credit
> 99.875% but < 100%	5% of MRC
>99.75% but < 99.875%	10% of MRC
>99.625% but < 99.75%	15% of MRC
> 99.5% but < 99.625%	20% of MRC
< 99.5%	25% of MRC

- 8.4.2. Service availability shall be measured as a percentage of the availability of the Service for a Customer Site in a given month.

8.4.3. Service Credit calculation:  $\text{Service Availability \%} = \frac{\text{Service Period} - \text{Service Downtime}}{\text{Service Period}}$

8.4.4. If the Customer is entitled to receive Service Credits on more than one element as set forth above to the same Service-affecting incident, the Customer shall only be entitled to the largest Service Credit that it would otherwise be entitled to receive under a service element.

## 9. EXCHANGE RATE FLUCTUATIONS

- 9.1. For Charges for any element of the Service that is based on a foreign currency, the exchange rate to be used to determine a variation shall be the South African Rand / US Dollar exchange rate set out in the relevant COF. In the event that the COF does not stipulate the exchange rate, then the exchange rate as downloaded by Liquid Telecom from Reuters on the morning of the date of signature by the Customer of the COF relevant COF shall be used.
- 9.2. Liquid Telecom shall be entitled to adjust the MRC in question in the event that the variance, when the exchange rate referred to in 9.1 above is compared against the exchange rate as downloaded by Liquid Telecom from Reuters on the morning of the relevant invoice generation date, is greater than 5% (5 percent).

## 10. EXCLUSIONS

- 10.1. The Customer shall not be entitled to receive any Service Credits or exercise any right of termination for anything which is caused or is associated with, in whole or in part, the exclusions set out below:
  - 10.1.1. anything which is associated with or caused by Planned Maintenance events or cable cuts on the Network which are not otherwise due to the fault or negligence of Liquid Telecom;
  - 10.1.2. anything which is associated with or caused by interruptions or delays of any other Service procured from Liquid Telecom by the Customer, and as a consequence of such interruption or delay, the Customer is entitled to Service Credits from Liquid Telecom; or
  - 10.1.3. anything attributable to circuits comprising a part of the Service that are provided by a third party, including Local Loops and local access facilities procured by the Customer.
- 10.2. Service Downtime shall not include any unavailability resulting from:
  - 10.2.1. scheduled downtime for Planned Maintenance;
  - 10.2.2. interruptions or delays resulting from any third party services procured by the Customer;
  - 10.2.3. any supplies, power, equipment or local access facilities provided by the Customer or their suppliers, which is required in the provision of the Services;
  - 10.2.4. any incident that affects the availability during any period when the Customer elects not to allow Liquid Telecom access to the Colocation Site and/or to conduct Planned Maintenance on the Service at the request of Liquid Telecom, acting reasonably;
  - 10.2.5. the Customer's applications, equipment, or facilities;
  - 10.2.6. interruptions due to the failure of equipment provided by the Customer or other third party on behalf of the Customer;

- 10.2.7. acts or omissions of the Customer, its agents, contractors or vendors (including the provision of inaccurate information knowingly or unknowingly), or user of the Service or Customer-caused outages or disruptions;
- 10.2.8. suspensions due to non-payment of any amount payable by the Customer to Liquid Telecom under this Schedule; or
- 10.2.9. force majeure.

**11. FAULT REPORTING**

- 11.1. The Customer shall raise an outage trouble ticket with Liquid Telecom in the event of any Service outage detected.
- 11.2. The logging of calls, queries and/or complaints shall be directed to the Liquid Telecom Enterprise Service Desk using any of the following:

TELEPHONE NO.	E-MAIL
+27 11 585 0652 (outside of South Africa) 080 11 11 636 (within South Africa only)	<a href="mailto:EnterpriseService@LiquidTelecom.co.za">EnterpriseService@LiquidTelecom.co.za</a>

- 11.3. Should a call logged in accordance with clause 11.2 not be handled to the reasonable satisfaction of the Customer, the Customer shall be entitled to direct their concerns to [service.management@LiquidTelecom.co.za](mailto:service.management@LiquidTelecom.co.za), which is managed during Business Hours.
- 11.4. In addition, the Customer shall be entitled to approach an assigned Liquid Telecom account manager if the feedback or progress on the outage resolution is not satisfactory.
- 11.5. Liquid Telecom shall use reasonable endeavours to provide a root cause analysis report regarding the cause of the Service Downtime and the preventive measures put in place in an effort to mitigate a reoccurrence thereof. Liquid Telecom shall use reasonable endeavours to perform the following actions and shall provide the reports (as applicable) detailed in the following table:

FAULT MANAGEMENT AND REPORTING	TIME TARGETS
Assignment of Customer Fault Reporting Trouble Ticket	Within 15 minutes of the notification of fault
Root Cause Analysis Report	On Request < Ten (10) business days
Regular problem status update	

- 11.6. In the event that Liquid Telecom attends to a Service fault and/or Service outage (“Fault”) reported by the Customer, and Liquid Telecom subsequently establishes that the Fault was not due to any fault on the Liquid Telecom Network and/or Liquid Telecom infrastructure deployed in the delivery of the Service, Liquid Telecom shall have the right to charge the Customer for the time and materials and/or travel costs associated with attending to the Fault at Liquid Telecom’s current standard rates and charges at the time of the incident.

**12. SERVICE CREDIT REQUEST AND SETTLEMENT PROCEDURES**

- 12.1. To initiate a claim for Service Credits with respect to the parameters defined above, the Customer shall submit a request in writing within thirty days after the end of the month during which the event occurred which gave rise to the claim for Service Credit.



- 12.2. For purposes of calculating the Service Credit, the problem occurrence will be deemed to have commenced when the trouble ticket is lodged by the Customer with Liquid Telecom. If the Customer does not initiate a trouble ticket with Liquid Telecom, Liquid Telecom shall not be obligated to log a trouble ticket, and the Customer shall not be eligible to receive Service Credits for the non-compliance.
- 12.3. The duration of the Service outage will be determined by the Parties, acting reasonably, based upon the Parties' internal records and Liquid Telecom's trouble ticket.
- 12.4. In no event shall the total amount of all Service Credits issued to the Customer per month exceed twenty five percent (25%) of the MRC invoiced to the Customer for the affected Service and/or for the Colocation Site in question, as the case may be, for that month.
- 12.5. Credits are calculated after the deduction of all discounts and other special pricing arrangements, and may not be applied to governmental fees, taxes, surcharges, local access charges or any other charges other than MRC.
- 12.6. Service Credits are processed quarterly and are passed as a credit against the Customer's next invoice. If Liquid Telecom approves the claim, Liquid Telecom shall notify the Customer of the value of Service Credits to which the Customer will be entitled.
- 12.7. Any Service Credits calculated on the basis of a month shall be calculated with regard to a month being deemed to begin at 12:00am S.A. Time on the first day of a calendar month, and ending at 11:59pm S.A. Time on the last day of the applicable calendar month.
- 12.8. Liquid Telecom's failure to achieve or maintain the above service objectives set out in this Service Schedule is not a breach of the Agreement, and the award of Service Credits shall be the Customer's sole remedy and Liquid Telecom's sole liability for any such failure or corresponding degradation, interruption or loss of Service.

### **13. SERVICE PROVISIONING**

- 13.1. The Customer shall be responsible for obtaining all third party approvals and consents necessary for the implementation and use of the Services.
- 13.2. The Customer shall ensure that all necessary Customer controlled server system changes and configurations are completed as may be required by Liquid Telecom to fulfil its obligations in terms hereof.
- 13.3. Within seventy two (72) hours of completing the implementation for the applicable Service, Liquid Telecom will provide a Service Handover Form containing essential information required to configure and use the Service as well as the Service Identity Number ("Service ID"). The Service ID should be used in all interactions with Liquid Telecom regarding the Service.
- 13.4. The Customer shall then conduct acceptance tests on the newly provided Service for a period of two (2) Business Days following receipt of the Service Handover Form.
- 13.5. Should the Customer detect a fault on the Service during these acceptance tests, then the Customer shall notify Liquid Telecom of such fault in writing.
- 13.6. The Customer may only reject a Service on the basis that the agreed technical specifications as set forth in the Service configuration diagram in the COF for the Service have not been met. If the Customer notifies Liquid Telecom of its non-acceptance, further tests of the Service shall be conducted and a revised Service Handover Form shall be provided to the Customer.
- 13.7. The Service shall be deemed accepted by the Customer if no objection has been raised by the Customer within two (2) Business Days following receipt of the Service Handover Form.

## 14. CUSTOMER REQUESTED CHANGES AND PLANNED MAINTENANCE

14.1. Liquid Telecom shall use reasonable endeavours to perform any agreed change as per agreed specifications as per the below specified target timelines. The Customer must raise a change request stating the reason for the change, the type of change (Customer Requested Change or Planned Change) and the impact on its Customer Sites. The change request shall follow the normal change management process as communicated from Liquid Telecom to the Customer from time to time.

### 14.2. Customer Requested Change

14.2.1. In an event the Customer requests for a change to be implemented by Liquid Telecom, this request must reach Liquid Telecom at least 3 Business Days before the scheduled change window. This will allow Liquid Telecom to arrange and plan resources required to implement the requested change.

14.2.2. Notifications for Customer requests that will affect Liquid Telecom Equipment which is collocated at Customer Site must be sent to Liquid Telecom at least 24 days before the scheduled change window. These change requests will go through the entire change life cycle as Planned Changes in order to ensure that a proper impact analysis is performed and that all the affected stake holders are informed.

### 14.3. Planned Changes

14.3.1. A Planned Change is a set of activities in an organization that are intentional, goal-oriented and are performed in a controlled manner.

14.3.2. These activities are performed during a standard change window (from 00:00 to 06:00), with the exception of those changes that can only be performed during daylight due to the health and safety regulations that govern these activities. i.e. climbing of mast poles is regarded as a safety risk when it's done at night.

### 14.4. Emergency Changes

14.4.1. An Emergency Change is an unplanned event that will have an impact on a Service or the Network unless an urgent action is taken to address or resolve the issue.

14.4.2. An Emergency Change may also be required to resolve issues that are already affecting a Service.

TYPE OF CHANGE	DESCRIPTION OF DETAILS REQUIRED / DETAILS PROVIDED	INITIATOR
Customer Request	<ul style="list-style-type: none"> <li>• Reason for change</li> <li>• Proposed date, and start and end time, of implementation</li> <li>• Scope of work (in the event the change will expose or impact Liquid Telecom Equipment)</li> <li>• Fall-back plan (in the event the change will expose or impact Liquid Telecom Equipment)</li> </ul>	Customer
Planned	<ul style="list-style-type: none"> <li>• Reason for change</li> <li>• Scheduled date, and start and end time, of implementation</li> <li>• Scope of work</li> <li>• Fall-back plan</li> <li>• Affected services</li> </ul>	Liquid Telecom
Emergency	<ul style="list-style-type: none"> <li>• Reason for change</li> <li>• Scheduled date, and start and end time, of implementation</li> <li>• Scope of work</li> <li>• Fall-back plan</li> <li>• Affected services</li> </ul>	Liquid Telecom

14.1. The Customer agrees that any change requests mentioned above could be Service affecting and that the Service may be unavailable for a minimum period of two (2) hours during the implementation of any such change requests. The time and date of the Service Downtime shall be discussed between the Parties. In any case, the Service Level targets set out in this Service Schedule shall not be applicable during any such change request implementation and as such, Liquid Telecom cannot be held responsible for any damages or losses which may occur during such implementation time.

14.2. Liquid Telecom is not responsible for any breach of rights which may be related to any Customer transmitted or received content that has been carried on the Liquid Telecom Network and the Customer agrees that Liquid Telecom is entitled to view such content to identify Service related issues.

**15. CONTENT REGULATORY COMPLIANCE**

15.1. The Customer hereby agrees that the relevant permissions, approvals, licenses and/or related consents that may be required by the relevant government authority of the source and/or destination country/countries shall be obtained, as applicable, as per the local laws in such country/countries and a copy of such permissions, approvals, licenses and/or related consents shall be available for inspection by Liquid Telecom prior to the commissioning of the Service.

15.2. In the event that the Customer is sourcing content from a third party in relation to the Service, the Customer shall be responsible for providing the permissions, approvals, licenses and/or related consents of such third party. The Customer further indemnifies Liquid Telecom from any costs, damages and/or penalties caused due to any non-compliance with this provision.

15.3. The Customer authorizes Liquid Telecom to monitor the Service at Liquid Telecom’s Network Operating Centre facilities.

**16. SERVICE TERMINATIONS – EARLY TERMINATION COSTS**

Notwithstanding any early termination provisions set out in the Agreement, the termination fee for the Terminating Services which are specified as Customer Specific Services in the relevant COF or where the Service either originates from or terminates at an international location shall be calculated from the Termination Date and shall be equal to 100% of the MRC for the remainder of the Contract Term thereof.