SERVICE DESCRIPTION: DATA SERVICE

1. THE SERVICE

The Data Service (DS) is a wholesale uncontended symmetrical dedicated point-to-point private leased circuit service within the Kingdom of Bahrain (particularly specified at Annex 1) between a Licensed Mobile Operator’s Point of Presence and a Wireless Radio Site which permits transmission of all types of traffic by a Licensed Mobile Operator.

Available To: Licensed Mobile Operators holding an appropriate licence.

2. DEFINITIONS

Capitalised terms not defined in this Service Description are defined in Schedule 8 Part 1 (Dictionary). Terms defined in this Service Description are specific to it.

Aggregation Link means the connectivity established between a Point of Presence of the MNO and a SE access node.

Connection means the connection from the Wireless Mobile Site to the Aggregation Link.

Customer Premises Equipment or CPE shall mean that Equipment forming part of the DS at the Wireless Radio Site more particularly specified under Annex 3 (Technical Characteristics).

Downgrade means a decrease in the throughput of the Connection following a Downgrade Request.

End User Premises means a permanent physical location in Bahrain owned or controlled by a person or organisation that is neither a licensee, nor affiliated to or controlled by a licensee, and from which location that person or organisation conducts business and receives telecommunication services.

Exceptional Delivery Date means the date defined at paragraph 3.4(d).

Initial Launch Period means a 12 month period commencing with the commercial launch date of the Service when Maximum Delivery Dates are modified.

Licensed Mobile Operator or MNO means a Licensed Operator of a Mobile Network.

DS Service Agreement means an agreement to provide DS Service formed by the acceptance by SE of an Order submitted by the MNO.

DS Amended Service means a DS Service that is amended by the relocation within the Kingdom of Bahrain of the Wireless Radio Site/ Point of Presence or by a change in throughput of the Connection.

DS Service means the service defined at paragraph 1 above.

Minimum Service Period means an applicable minimum period of twelve (12) calendar months for which the DS Service will be provided, such period commencing from the Service Commencement Date.

MNO Core Mobile Site means a location in Bahrain owned or controlled by the Licensed Mobile Operator which hosts equipment for mobile control functionality on its Mobile Network.

Order means a written request by the MNO in the format specified by SE (subject to change from time to time) for a DS Service.

Point of Handover means the port on the CPE (Wireless Radio Site equipment provided by SE) at the Wireless Radio Site and the port on the CPE or Equipment at the Point of Presence.

Point of Presence means a permanent physical location hosting the MNO Core Mobile Site in Bahrain where an Aggregation Link or a Connection is terminated at premises owned or shown to be leased or licensed by the MNO for DS Service or at a SE collocation facility, but for the avoidance of doubt cannot
be at an End User Premises cable station, earth station, manhole, power room, lead-in pipe, duct, outdoor cabinet, MDF, riser room or anywhere not on the main island of Bahrain unless connected by a permanent physical connection above sea level and accessible by SE.

**Ready for Test (RFT) Date** means the date when all elements to the DS Service have been successfully installed and ready for end-to-end testing by SE and the Access Seeker, such testing to be carried out in accordance with Annex 4.

**Renewed Minimum Service Period** means an applicable minimum period of one (1) month for which the DS Service will be provided, such period commencing from the expiry of a Service Period.

**Service Commencement Date** for each Order for the DS Service will be the date of successful implementation and notified handover (as further performed in Annex 4 (provisioning validation test) of the DS Service by SE to the MNO.

**Service Credit** means, in relation to a single service credit, that amount represented by 1% of the monthly rental charge.

**Service Levels** means the set of parameters defining the minimum performance expected from the DS product and its services. Service Levels include Service Level Terms, and Service Level Penalties.

**Service Level Terms** means the set of defined performance targets that must be met by SE in relation to the request, delivery, quality management and fault management of the DS product and its services.

**Service Period** means the Minimum Service Period or Renewed Minimum Service Period.

**DS Service** shall have the meaning in clause 1.

**Upgrade** means an increase in the throughput of the Connection following an Upgrade Request.

**Wireless Radio Site** means a mast, Tower, pole or rooftop radio station or any other type of Public Radio Communications Station as defined in Decision No. 10 of 2018 relating to the regulation on the permitting, installation, upgrading and maintenance of public radiocommunications stations issued by the Regulator excluding temporary cell sites (cell on wheels) owned, leased or licensed by Licensed Mobile Operators.

3. **TERMS**

3.1 **Forecasting**

Every six months commencing with the coming into effect of the DS Service Request under Schedule 2, the MNO shall supply a non-binding forecast of the DS Service the MNO anticipates that it will require in each month of the twelve month period following the date of the forecast, in the form required by SE from time to time. The forecast shall include the following:

- Wireless Radio Site address or another identifier in a form that is accepted by SE acting reasonably.
- Capacity required to connect the Wireless Radio Site.

The MNO shall use all reasonable endeavours to forecast accurately given SE is placing reliance on those forecasts. If the number of Connections requested in any given quarter exceeds or fails to meet the forecast in accordance with the thresholds in paragraph 3.4(j), then the Service Level Terms and Service Level Penalties for delivery are no longer binding.

3.2 **Initial Launch Period**
After the coming into effect of this DS Service Request under Schedule 2, the parties shall in good faith review and agree a plan for the initial Orders to be made during the Initial Launch Period. Such plan shall include revised proposed Maximum Delivery Times and Maximum Delivery Dates for each Order. The plan shall also take into account objective non-discriminatory criteria for prioritising delivery such as accessibility, efficiency in use of resources, availability of existing access fibre, distance from SE’s core network, civil works required, technical complexity of deployment, whether concurrent Orders received in the same vicinity, MNO’s operational requirements and DS Orders received from other MNOs in the Initial Launch Period.

3.3 Use of Service

(a) DS shall only be made available to connect Wireless Radio Sites with the core network of the Licensed Mobile Operator and not any other residential or business entity or End User.

(b) Where SE reasonably suspects breach of paragraph 3.3(a) it may refer the matter as a complaint for investigation by the Regulator.

(c) Where the Regulator establishes after an investigation under (b) that a Licensed Mobile Operator is not using the DS in accordance with this Service Description, SE without prejudice to any other rights and remedies under these Supply Terms may by immediate written notice suspend or terminate all or part of the Data Service Connections and the Licensed Mobile Operator shall be liable to pay SE liquidated damages, equal to the difference in Charges for the remaining Service Period between the actual Charges paid for the non-compliant Data Service and the Charges that would have been paid for a compliant service (if they are higher).

3.4 Supply of Service

- Please refer to the table in Annex 2 for SLAs
  The MNO must submit an Order to SE to request supply of the DS Service in accordance with the DS Service Agreement and in the form that will be shared by SE.

(a) SE will within two (2) Working Days advise the MNO if the Order form is accepted or rejected and where applicable, state the required corrections.

(b) If the MNO requests to cancel a Service Request three or more Working Days after the notice RFS Date and where this is not related to delay in the actual RFS Date by SE, the MNO shall on receipt of a reasonable standard of itemised billing information from SE be liable to pay the actual costs incurred in relation to the Service Request to SE.

(c) Within five (5) Working Days from the date of the acceptance of the Order form, SE will advise the MNO in writing of the applicable maximum lead delivery time. For the avoidance of doubt, SE reserves the right to reject the Order during this stage if SE’s point to point fibre network does not extend to the requested area within the Kingdom of Bahrain because the Point of Presence or the Wireless Radio Site is anywhere not on the main island of Bahrain unless connected by a permanent physical connection above sea level and accessible by SE.

(d) SE shall endeavour to provision and deliver the DS Service by the standard time scales set out in Annex 2 however the Parties acknowledge and accept that exceptional
circumstances, may give rise to delays in any stage of the acceptance, provisioning and delivery of a Service Request. If the occurrence of any of the events below takes place, SE shall communicate the Exceptional Delivery Date to the MNO and shall not be held liable for any penalties that may otherwise apply when exceeding the Service Level Penalties. The exceptional circumstances shall comprise:

(i) a Force Majeure Event or a Regulatory Event (Schedule 9 clause 16);
(ii) planned maintenance (Schedule 6 para 8);
(iii) events either caused by or which are under the reasonable control of the MNO
(iv) lack of point to point fibre infrastructure in the area
(v) any breach of the MNO’s obligations under clause 3.7 below or otherwise under these Supply Terms

(e) If a SE technician must be present at the end-user site to install a connection, and if, for any reason, the Access Seeker and/or end-user cannot be available on the Expected RFT Date for such installation, the Access Seeker must give SE a minimum written notice of two (2) Working Days. The new dates for RFT and RFS are then set following the below principles:

(i) SE should propose the next earliest dates for which a SE technician would be available for the installation which shall be a minimum of one Working Day notice unless waived by the Access Seeker. The earliest proposed date(s) may exceed the Maximum Delivery Date if SE has no other availability until such date.
(ii) The Access Seeker is to choose one of the proposed dates which becomes the applicable Expected RFT Date.
(iii) The Expected RFS Date is also modified and is set apart from the Expected RFT Date by the Maximum Validation Time (see Annex 2 Service Level terms and definitions). The Maximum RFS Date is then set equal to the Expected RFS Date.
(iv) SE shall send the Access Seeker a notice of the applicable Expected RFT Date, Expected RFS Date, and Maximum RFS Date.

(f) In addition, if at least one of the following two conditions is met:
(i) the MNC does not provide SE a minimum written notice of one Working Day to inform of its unavailability; or
(ii) SE sends a technician who is not able to access the Wireless Radio Site to install the service, then except for cases of Force Majeure affecting the MNO, the MNO is liable to pay the installation and configuration charge for the DS Service. In such case, the modification and notification of Expected RFS Date, and the Maximum RFS Date follow the same principles as described in the above paragraph 3.4(g).

(g) For the avoidance of doubt, the MNO will, in this case, be liable to pay two (2) installation and configuration charges when the RFS Certificate is issued by SE.

(h) In addition, if SE does not provide the MNO a minimum written notice of two Working Days to rearrange a site visit under paragraph (f) (i) above, then SE is liable to waive an amount equal to one installation and configuration charge for the DS Service.

(i) Subject to the MNO fulfilling all of its obligations under this Service Description, SE will provide and the MNO will acquire the DS Service either within the standard time scales or
by the Exceptional Delivery Date as appropriate which shall include actual orders no:
being greater/below 30% of the forecast Order supplied in accordance with clause 3.1
For the avoidance of doubt, the Service Level Terms and Service Level Penalties shall
not apply for actual orders exceeding the forecast parameters in clause 3.1 and Annex 2
paragraph 1 (additional information).

(j) The DS Service is available at the speeds and prices set out in Schedule 3A. Where SE
has accepted an Order which requires the deployment of fibre access to the Wireless
Radio Site, SE may also seek to recover the part of the costs of such deployment through
an additional non-recurring charge for the additional passive infrastructure required. SE
cost of work contribution shall equal three (3) months MRC relating to the initial speed
requested by the MNO in the Order. The MNO shall if approved in writing pay the
remainder of the cost of work for the Order.

(k) The range of services associated with the DS Service for which Service Level Terms
shall apply are:

- New Connection – provide a new connection as requested by the MNO;
- Upgrade and Downgrade – upgrade or downgrade the speed of an existing
  connection;
- Hot and Cold Migration – change the Wireless Radio Site address of an existing
  Connection, requiring disconnection and reconnection of the Connection end point
  including “hot migration” which is when the Connection is not disrupted and “cold
  migration” which is when the Connection can be disrupted;
- Reconfiguration – reconfigure technical parameters of an existing Connection; and
- Cancellation – MNO requests the relinquishment of an existing Connection.

Further information relating to the applicable Service Levels Terms and Service Level
Penalties for the above is detailed in Annex 2 of this Service Description.

(l) SE shall provide to the MNO a monitoring tool, which shall enable the MNO to monitor
the DS Connections against the following parameters, 24 hours a day, 7 days a week:

(i) Link availability
(ii) Bandwidth utilization

3.5 Termination

(a) Where the Minimum Service Period has not expired, the MNO shall be entitled to
terminate such DS Service Agreement on at least one month’s written notice to SE and
will be liable to pay Liquidated Damages as calculated by the following formula.

Formula for calculating liquidated damages:

DATA SERVICE (DS) - 15 October 2018
LD = MRC x (12-M)

where:
LD = liquidated damages to be paid
MRC = Relevant Monthly Recurring Charges defined as the maximum DS monthly service charge paid since the Actual RFT Date
M = Number of months between the RFS Date and the removal order date rounded-up to the next full month.

The MNO expressly acknowledges that liquidated damages as calculated above form a reasonable pre-estimate of the loss which SE would suffer as a result of early termination by the MNO. Such liquidated damages shall be SE's sole and exclusive damages or monetary remedy for such early termination.

(b) Following the expiry of any Minimum Service Period the DS Service Agreement shall be automatically renewed for a Renewed Minimum Service Period unless terminated by the MNO, provided that the MNO supplies SE with a termination notice at least one (1) month prior to the expiry of the current Service Period.

3.6 Amendment to the DS Service

(a) The MNO shall be entitled to amend a DS Service Agreement by requesting a DS Amended Service where this is an upgrade the throughput by providing notice to SE. The MNO shall only be entitled to downgrade the throughput of a Connection when the Minimum Service Period has expired. Where the MNO requests a DS Amended Service, then the Order procedure at paragraph 3.4 shall apply to that request. Where the MNO requests a DS Amended Service that requires any new network resources and/or facilities then a new Minimum Service Period shall commence and SE shall provide a DS Amended Service for the new Service Period.

(b) The MNO shall not be liable for any termination or additional recurring charges in respect of a request for a DS Amended Service which is for a relocation. SE shall charge a once off charge for the relocation equivalent to the non-recurring charges (configuration and installation and cost of fibre and/or duct where applicable) for the DS unless the MNO requires both Connections to be operational in parallel. For the avoidance of doubt, SE shall not terminate the Connection which is subject to relocation until the Service Commencement Date of the new Connection.

3.7 MNO Obligations

(a) The MNO must provide SE with suitable space for, and access at all reasonable times to, any SE Equipment required to be located in any building in which the DS Service is located within the control of the MNO. If consent is required from a third party, the MNO shall procure such consent. SE is not required to pay the MNO for the preparation or use of, or access to, space provided pursuant to this sub-paragraph.

(b) When provisioning an Order requiring new duct build, SE is responsible for construction of the duct on public land up until the demarcation point being the boundary of the plot where the Wireless Base Station is located. The MNO is responsible for construction of the lead-in duct or in-building duct or conduit from the demarcation point to the Wireless Base Station and/or aggregation Point of Presence.

(c) If SE's Equipment requires electricity supply and electricity connection points, they shall be supplied, in the location specified by SE, to the MNO at the MNO's expense according
to the equipment specification. Such electricity shall be available at the same level of supply, protection and continuity as that available to the MNO’s or Wireless Radio Site’s Equipment, as appropriate.

(d) The MNO shall be solely responsible for any loss, theft or destruction of, or damage (reasonable wear and tear excepted) to SE’s Equipment required to be located in the building in which the DS Service is located within the control of the MNO or the Wireless Radio Site, howsoever caused (unless caused by SE or its agents), occurring at any time while such SE Equipment is so located.

(e) The MNO must provide SE and any authorised employee, agent, affiliate or contractor of SE with all information and assistance that person may reasonably require to design, test, commission and maintain the DS Service (which may include, without limitation participation in testing procedures as and when reasonably requested by SE).

(f) For the avoidance of doubt the MNO may require their agent to be present during the installation, testing or commissioning done by SE but not so as to affect the Service Commencement Date.

3.8 Planned and Emergency Maintenance

(a) Notwithstanding the above, SE may suspend any DS Service in order to carry out planned or emergency maintenance.

(b) In the case of planned maintenance, this will be carried out as far as possible during the night or at weekends or other quiet periods. SE will give ten (10) Working Days’ notice of each planned maintenance activity affecting a particular DS Service or group of DS Services. This will include the circuits affected, the date and time of the suspension and the likely duration of the suspension. SE shall use its reasonable endeavours to take into account the reasonable operational concerns of the MNO before implementing any planned maintenance.

(c) In the case of emergency maintenance SE will advise the MNO as soon as possible after the emergency suspension of the service and in any case no more than five (5) hours after the emergency suspension. This advice will include the circuits affected and an estimate of the likely period of emergency suspension and in the case that the suspension is over then the reason for the emergency maintenance.

(d) In cases of emergency maintenance SE will advise the MNO within five (5) hours after service is restored with a report of the cause of the Fault.

3.9 Maintenance and Support

(a) SE shall provide maintenance and support services in respect of the DS Service in accordance with Annex 2.

(b) The MNO will report a Fault to the SE nominated contact point which shall be available twenty-four (24) hours per day every day. SE will record the Fault using a unique reference which it shall pass to the MNO and both parties will agree the time of the report. SE will commence repair of the Fault within:

(i) 2 working hours during working hours; or

(ii) 4 hours outside of working hours,

from the time of receiving the report and will restore the service within 6 hours of the report. SE will advise the MNO nominated contact point once the Fault is clear and both parties will record the time of this clearance.
3.10 Protection

(a) If requested by the Licensed Mobile Operator, SE shall provide logical protection for the DS Aggregation Link.

4. CHARGES

(a) The MNO shall pay to SE the relevant Charges determined in accordance with Schedule 3A.

(b) All Charges and sums due from one party to the other under this Agreement are exclusive of VAT. Any VAT shall be charged in accordance with the relevant regulation in force at the time of making the taxable supply and shall be paid by the paying party following receipt from the billing party of a valid VAT invoice.

5. SERVICE LEVEL AGREEMENT

SE shall provide the DS Services in accordance with the service level agreement at Annex 2 to this Service Description.

If the parties agree a plan for implementation during the Initial Launch Period, then the Service Level Penalties shall be varied according to the revised delivery dates.
## ANNEX 1 - CIRCUIT SPEEDS, DEFINED INTERFACES, MEDIA AND TOPOLOGY

<table>
<thead>
<tr>
<th>Service element</th>
<th>Speed</th>
<th>Interface</th>
<th>Connector</th>
<th>Topology</th>
<th>Access</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection terminating at Wireless Radio Site / P.o.P</td>
<td>500 Mbit/s to 10 Gbit/s</td>
<td>gigabit Ethernet 1000BASE-LX gigabit Ethernet 10,000BASE-SX</td>
<td>SC/LC</td>
<td>Ethernet service point-to-point</td>
<td>Fibre</td>
</tr>
<tr>
<td>Aggregation Link terminating at the Point of Presence of the MNO</td>
<td>up to 10 Gbit/s</td>
<td>gigabit Ethernet 1000BASE-LX gigabit Ethernet 1000BASE-SX</td>
<td>SC/LC</td>
<td>Ethernet service point-to-point</td>
<td>Fibre</td>
</tr>
</tbody>
</table>
ANNEX 2 – SLA

The Service Level Terms and definitions of applicable terms for the DS service request process are set out in the table below (defined terms are capitalized and italicised):

<table>
<thead>
<tr>
<th>Service Request Acknowledgement</th>
<th>Service Request Confirmation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Deliverable</strong></td>
<td></td>
</tr>
<tr>
<td>The MNO receives a notice from SE acknowledging receipt of the MNO's Service Request.</td>
<td>The MNO receives a notice from SE informing that SE either accepts a Service Request or rejects it because insufficient or incorrect information is provided by the MNO in the Service Request Form.</td>
</tr>
<tr>
<td><strong>Actual measure of performance</strong></td>
<td></td>
</tr>
</tbody>
</table>
| *Actual Time for Service Request Acknowledgement* means the time period between the following events:  
  a. the MNO sends a Service Request to SE, and  
  b. the MNO receives a notice from SE acknowledging that the Service Request has been received. | *Actual Time for Service Request Confirmation* means the time period between the following events:  
  a. the MNO receives a notice from SE acknowledging that the Service Request has been received; and  
  b. one of the following events, whichever happens the soonest:  
     i. the MNO receives a notice from SE indicating that the information provided by the MNO in the Service Request Form is incorrect and/or insufficient to progress the Service Request to the service delivery process; or  
     ii. *Accepted Service Request* (explicit acceptance from SE) which happens when the MNO receives a notice from SE confirming that the information provided by the MNO in the Service Request Form is correct and sufficient to progress the Service Request to the service delivery process. |

<p>| <strong>Service Level Terms</strong> | <strong>Maximum Time for Service Request Acknowledgement</strong> means the maximum Actual Time for Service Request Acknowledgement that SE should meet at all times. | <strong>Maximum Time for Service Request Confirmation</strong> means the maximum Actual Time for Service Request Confirmation-after which SE is subject to Penalties for Service Request Confirmation |</p>
<table>
<thead>
<tr>
<th>Service Request Acknowledgement</th>
<th>Service Request Confirmation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service Level Penalties</strong></td>
<td><strong>Penalties for Service Request Confirmation</strong> means the penalties due by SE for not meeting the Maximum Time for Service Request Confirmation</td>
</tr>
<tr>
<td><strong>Penalties for Service Request Acknowledgment</strong></td>
<td>There are currently no penalties for failure to meet the Maximum Time for Service Request Acknowledgment. When the MNO does not get an acknowledgment notice from SE within the Maximum Time for Service Request Acknowledgment, the MNO should follow up/escalate its request directly with its SE wholesale account manager.</td>
</tr>
</tbody>
</table>

The Service Level Terms and definitions of applicable terms for the DS service delivery process are set out in the table below (defined terms are capitalized and italicised):

<table>
<thead>
<tr>
<th>Service Level</th>
<th>Notification of Expected RFT and RFS Dates</th>
<th>Service Level for RFS Date</th>
</tr>
</thead>
</table>
| **Deliverable** | MNO receives a notice from SE of the dates that SE expects the connection to be Ready For Test ("RFT") and then Ready For Service ("RFS"). In such notice, SE also indicates the Maximum RFS Date, the Maximum Delivery Time and the Maximum Delivery Date. The Maximum RFS Date must be set no later than the Maximum Delivery Date. | MNO receives a RFS Certificate from SE confirming that:  
a. the connection has been provisioned and tested by SE;  
b. the connection is properly registered in all of SE’s systems (e.g. OSS/BSS, service level monitoring platform, Fault reporting system etc.);  
c. the connection has been validated by the MNO (or deemed to have been validated by the MNO if the Maximum Validation Time has lapsed); and  
the connection is ready for service and the MNO will be invoiced accordingly. |
| **Actual measure of performance** | **Actual Time for Notification of Expected RFT and RFS Dates** means the time period between the following events:  
a. Accepted Service Request, and  
b. the MNO receives a notice from SE indicating the Expected RFS Date; the Maximum Delivery Time; and the Maximum Delivery Date. | **Actual Delivery Time** means the time period between the following events:  
a. Accepted Service Request, and  
b. Actual RFS Date which happens when the MNO receives the RFS Certificate from SE.  
SE may only issue the RFS Certificate to the MNO after one of the following events, whichever happens the soonest:  
a. the MNO sends a notice to SE confirming that the connection has been
<table>
<thead>
<tr>
<th>Service Level Terms</th>
<th>Notification of Expected RFT and RFS Dates</th>
<th>Service Level for RFS Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>correctly provisioned and can be considered RFS; or</td>
<td></td>
</tr>
<tr>
<td></td>
<td>b. the end of the Maximum Validation Time i.e. the MNO has not explicitly raised any issue and the Maximum Validation Time lapsed ).</td>
<td></td>
</tr>
</tbody>
</table>

**Maximum Validation Time**

means the maximum Actual Validation Time after which, absent formal notice from the MNO, SE may issue the RFS Certificate

**Actual Validation Time**

means the time period(s) between the following events:

a. *Actual RFT Date* which happens when the MNO receives a notice from SE confirming that the connection has been provisioned the same day and is ready for test; and

b. one of the following two events, whichever happens the soonest:
   i. the MNO sends a notice to SE confirming that the connection is performing in accordance with the Acceptance Criteria:
   ii. the end of the Maximum Validation Time,

The Actual Validation Time is suspended between the following events, if such events occur:

a. the MNO sends a notice to SE indicating that the connection is not performing in accordance with the Acceptance Criteria; and

b. the MNO receives a notice from SE indicating that the connection has been re-provisioned.

<table>
<thead>
<tr>
<th>Service Level Terms</th>
<th>Maximum Time for Notification of Expected RFT and RFS Dates</th>
<th>Maximum RFS Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>means the maximum Actual Time for Notification of Expected RFT and RFS Dates after which SE is subject to Penalties for Notification of</td>
<td>means the last day on which the MNO should receive the RFS Certificate for SE not to be subject to Penalties for RFS Date. Actual RFS Date ≤ Maximum RFS Date.</td>
</tr>
<tr>
<td>Service Level</td>
<td>Notification of Expected RFT and RFS Dates</td>
<td>Service Level for RFS Date</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------------------------------</td>
<td>----------------------------</td>
</tr>
<tr>
<td></td>
<td>Expected RFT and RFS Dates.</td>
<td>The Maximum RFS Date corresponds to the Expected RFS Date, if the latter has never been modified after the notice of Expected RFT and RFS Dates. If the Actual RFS Date happens after the Expected RFS Date, SE shall be subject to Penalties for RFS Date.</td>
</tr>
<tr>
<td>Service Level Penalties</td>
<td>Penalties for Notification of Expected RFT and RFS Dates means the penalties due by SE for not meeting the Maximum Time for Notification of Expected RFT and RFS Dates.</td>
<td>Penalties for RFS Date means the penalties due by SE for not meeting the Maximum RFS Date as specified below.</td>
</tr>
</tbody>
</table>

The Service Level Terms and definitions of applicable terms for the DS fault management process are set out in the table and diagram below (defined terms are capitalized and italicised) and Schedule 6:

<table>
<thead>
<tr>
<th>Service Level</th>
<th>Fault Acknowledgment Time</th>
<th>Response Time</th>
<th>Restoration Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deliverable</td>
<td>The MNO receives a trouble ticket after having reported a Fault to SE.</td>
<td>The MNO receives a notice confirming that SE has started troubleshooting the Fault (either remotely or on site).</td>
<td>The MNO receives a notice from SE indicating the connection has been restored and the trouble ticket closed.</td>
</tr>
</tbody>
</table>

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<table>
<thead>
<tr>
<th>Service Level</th>
<th>Fault Acknowledgment Time</th>
<th>Response Time</th>
<th>Restoration Time</th>
</tr>
</thead>
</table>
| **Actual measure of performance** | **Actual Fault Acknowledgment Time** means the time period between the following events:  
- c. the MNO reports a Fault to SE, and  
- d. the MNO receives a trouble ticket from SE for the reported Fault. | **Actual Response Time** means the time period between the following events:  
- e. the MNO reports a Fault to SE, and  
- f. the MNO receives a notice from SE confirming that the troubleshooting of the Fault has started (either remotely or on site)  
Once a SE technician has started troubleshooting the Fault, SE is required to regularly update the MNO of the progress made to restore the connection, and to provide an indication of the anticipated restoration time. | **Actual Restoration Time** means the time period between the following events:  
- g. the MNO reports a Fault to SE, and  
- h. the MNO receives a notice from SE indicating the connection has been restored and the trouble ticket closed.  
SE is allowed to close a trouble ticket only if one of the following conditions is met:  
- i. SE provides a proof (i.e. test results) that the connection is performing in accordance with the QoS Parameters; or  
- j. SE has received a confirmation from the MNO that the service is performing in accordance with the QoS Parameters. |
| **Service Level Terms** | **Maximum Fault Acknowledgment Time** means the maximum Actual Fault Acknowledgment Time that SE should meet at all times. | **Maximum Response Time** means the maximum Actual Response Time that SE should meet at all times. | **Maximum Restoration Time** means the maximum Actual Restoration Time after which SE is subject to Penalties for Restoration Time. |
| **Service Level Penalties** | **Penalties for Fault Acknowledgment Time** There are currently no penalties for failure to meet the Maximum Fault Acknowledgment Time. | **Penalties for Response Time** There are currently no penalties for failure to meet the Maximum Response Time. | **Penalties for Restoration Time** means the penalties due by SE for not meeting the Maximum Restoration Time as specified below. |

*planned or emergency Outages are excluded from the DS Service Availability uptime*
The Service Level Terms and Service Level Penalties for the DS service are set out in the table below:

<table>
<thead>
<tr>
<th>Service Levels</th>
<th>Service Level Terms</th>
<th>Service Level Penalties</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Service request process</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service Request Acknowledgment</td>
<td>Maximum Time for Service Request Acknowledgment: During working hours: 15 minutes following receipt of the Service Request Outside working hours: 15 minutes after the start of the first working hour following receipt of the Service Request</td>
<td></td>
</tr>
<tr>
<td>Service Request Confirmation</td>
<td>Maximum Time for Service Request Confirmation: 2 WD</td>
<td></td>
</tr>
<tr>
<td><strong>Service delivery process</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Notification of Expected RFT and RFS Dates</td>
<td>Maximum Time for Notification of Expected RFT and RFS Dates: Transfer Request, Upgrade/Downgrade Request, Reconfiguration Request, and Cancellation Request: Standard 5 WD For a Cancellation Request, SE shall only provide the Maximum RFS Date, which shall be the expected date of cancellation, taking into account the required notice period for cancellation. New Connection Request and Migration Request: 5 WD</td>
<td>Penalties for Notification of Expected RFT and RFS Dates: 5 Service Credits (‘SC’) for each WD after the Maximum Time for Notification of Expected RFT and RFS Dates until such time as the MNO receives the notice.</td>
</tr>
<tr>
<td>RFS Date</td>
<td>Maximum Delivery Time: Transfer Request, Upgrade/Downgrade Request, and Reconfiguration Request: 10 WD New Connection Request, Migration Request: - when a fibre is available for a new Connection: 10 WD - when a fibre is not available for a new Connection but there is sufficient duct space to pull an additional fibre access cable: 30 WD - when new ducts must first be installed before deploying a new fibre access cable: 60 WD (or Exceptional Delivery) Cancellation Requests do not have a Maximum Delivery Time: the Maximum RFS Date (i.e., expected cancellation date) must be defined to take into account the one-month notice period required for cancellation. In cases of Transfer Requests and Migration Requests, SE shall coordinate the deactivation and activation of the Connection on the same day to ensure minimum service disruption.</td>
<td>Penalties for RFS Date: 20 SC for failure to meet the Maximum RFS Date and 10 SC for each additional working day thereafter until the MNO receives the RFS Certificate (Maximum Penalty Cap 500 SC per Connection).</td>
</tr>
<tr>
<td>Service Levels</td>
<td>Service Level Terms</td>
<td>Service Level Penalties</td>
</tr>
<tr>
<td>----------------</td>
<td>---------------------</td>
<td>------------------------</td>
</tr>
</tbody>
</table>
|                | Maximum Validation Time: 3 WD  
The Maximum Validation Time does not apply to Cancellation Request. |                        |
| Acceptance Criteria | For Ethernet traffic: the provisioning test shall be based on the ITU Y.1564 standard |                        |
| Service quality management | | |
| QoS Parameters | For DS Connections (fibre-based):  
- Round Trip Delay (Frame Transfer Delay): 5 ms  
- Jitter (Frame Delay Variations): <5 ms  
- Frame Loss Ratio: 0% |                        |
| QoS Comments | - No QoS/service quality guarantee for mobile traffic  
- Access Seeker is responsible for managing class of service parameters |                        |
| Fault management process | | |
| Fault Acknowledgment Time | Maximum Fault Acknowledgment Time: 15 min |                        |
| Response Time | Maximum Response Time:  
2 working hours during working hours and 4 hours outside working hours |                        |
| Restoration Time | Maximum Restoration Time:  
6 hours | Penalties for Restoration Time:  
10 SC for failure to meet the Maximum Restoration Time + $ SC for each hour exceeding the Maximum Restoration Time  
Maximum Monthly Penalty Cap:  
300 SC per Connection and per month |

Additional information:

1. The maximum RFS lead time and the Service Credit for failure to meet the maximum RFS under this section shall not apply if:
   (a) The MNO does not submit a forecast in accordance with clause 3.1; or
   (b) The actual numbers of circuits ordered are
       (i) less than 70% of the forecasted circuits; or
       (ii) greater than or equal to 30% over the number of circuits forecasted by the MNO, provided the total number of forecasted circuits in a calendar month is greater than four (4).

In the case of (a) or (b) (i) above, the Service Credit shall be disapplied completely and in the case of (b) (ii) above it shall be disapplied in respect of the circuits ordered in excess of the forecast.
## ANNEX 3 – Technical Characteristics

<table>
<thead>
<tr>
<th>Service Type</th>
<th>Service Attribute</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ethernet service point-to-point or Ethernet service point-to-multipoint (Pseudowire Ethernet tagged mode with port-based aggregations or virtual aggregations) providing guaranteed symmetric bandwidth</strong></td>
<td></td>
</tr>
</tbody>
</table>

- **Interface**: Optical Access:
  1. FE1000 BASE-LX
  2. GE:1000Base-SX, 1000base –LX
  3. 10GE:10G base –SR, 10G Base LR, 10G Base –ZR, 10GE LAN, 10GE WAN.

- **Connector**: Fibre Access: Single mode LC

- **Speed**: Please refer to ANNEX 1

- **Mode**: Duplex

- **MAC Layer Supported**: Yes

- **MAC Address Learning**: Yes

- **Frame Size**: Min 1518, Max 9600 (Jumbo Frame), default 1522

- **Class of Service**: 100% Best Effort. No Over Utilisation

- **Maximum Number of CE-VLANs**: 4096

- **Unicast Traffic Limit**: Yes

- **Multicast Traffic Limit**: Yes

- **Broadcast Traffic Limit**: Yes

- **Protocol Treatment**: Spanning Tree Protocol (STP), Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSP)
  - Pause 802.3
  - Link Aggregation Protocol (LACP)
  - (802.1Q), (802.1Q) (802.1D), (802.1P)

---

CPE type (SE reserves the right to vary the CPE from time to time)

1 Gbits/s and below

Huawei S5300 SW + (3X 1G SFP) + 1 x 1G SFP+

Above 1 Gbits/s

Huawei S5300 SW + (4X 1G SFP) + 1 x 10G SFP+

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DATA SERVICE (DS) - 15 October 2018
## Provisioning Validation Test

<table>
<thead>
<tr>
<th><strong>Testing Methodology</strong></th>
<th>ITU-T Y.1564</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Testing Mode</strong>¹</td>
<td>Layer 1-2 Loopback test. Tester simulates CPE</td>
</tr>
<tr>
<td><strong>Parameters tested</strong></td>
<td>Throughput, Frame loss</td>
</tr>
<tr>
<td><strong>Tester Speed Setting</strong></td>
<td>DS Service Speed</td>
</tr>
<tr>
<td><strong>Tester Frame Size</strong></td>
<td>64, 128, 256, 512, 1024, 1280 and 1518 bytes</td>
</tr>
<tr>
<td><strong>Acceptance criteria</strong></td>
<td>Achieved throughput of 95% of DS Service Speed with zero frame loss. Five test iterations of approximately 10 minutes each conducted.</td>
</tr>
<tr>
<td><strong>Test Results</strong></td>
<td>Copy provided to the MNO upon request at time of testing</td>
</tr>
</tbody>
</table>
Annex 5 – DS Service Diagrams

Batelco NBN
Network Elements:

<table>
<thead>
<tr>
<th>Interface</th>
<th>Upgradable</th>
<th>Downgradable</th>
</tr>
</thead>
<tbody>
<tr>
<td>PE Site</td>
<td>G6/10G</td>
<td>G4/10G</td>
</tr>
<tr>
<td>Cell Site</td>
<td>2G/3G/4G</td>
<td>2G/3G/4G</td>
</tr>
</tbody>
</table>

Service Information:

- Connection terminating at Cell Site: 
  - Point of Presence: E1, T1, 155Mbit/s
  - Interface: E1, T1, 155Mbit/s

DATA SERVICE (DS) - 15 October 2018