

	Ethernet Service Schedule	LRE-TCO-009
Classification: External	Version 1.03	

Ethernet Service Schedule (Version 1.03)

Ethernet Fibre Services means the wide area communication services supplied by Neos Networks to the Customer at an agreed bandwidth which will allow the Customer to pass Ethernet frames over the specified circuits.

Ethernet Services

1. Ethernet Fibre

- 1.1. Ethernet Fibre is provided in P2P, P2MP and VPLS configurations which will be provisioned as Protected as standard. Unprotected Ethernet may be available upon the Customer's request.
- 1.2. Neos Networks Ethernet P2P can be provisioned as (i) On-Net i.e. between two PoPs; or (ii) Off-Net i.e. Off-Net Tail connection(s) and On-Net Virtual Connection between two Neos Networks routers providing site-to-site connectivity.
- 1.3. Neos Networks Ethernet VPLS can be provisioned as (i) On-Net i.e. between multiple PoPs or (ii) a mix of On-Net Access Tails and Off-Net Tail Circuit connection(s) providing any-to-any connectivity.
- 1.4. Bandwidth speed between PoPs can be provisioned in increments using 100Mbps, 1Gbps and 10Gbps bearers. Capacity is established on a per node basis at the time of order.
- 1.5. The Customer is charged for the bandwidth for Ethernet Fibre or the specific EoFTTC and EoFTTP bandwidth as per the Order Form.
- 1.6. Tail Circuit resilience is available on the Openreach EAD and EAD LA (either RO1 or RO2) and is also available from other third-party access providers.
- 1.7. Neos Networks does not prioritise Ethernet frames across the Network. This ensures that Ethernet frames are switched with the lowest possible latency. As the Network is engineered for low latency and high backbone capacity, Class of Service (CoS) is not required.

2. Ethernet NNI

Ethernet NNI is provided in External NNI and P2NNI configurations.

- 2.1.1. The External NNI service will be delivered in a common On-Net PoP and Customer data centre location.
- 2.1.2. P2NNI (E-Access) will usually be delivered as a combination of Off-Net Tail Circuits and On-Net Access Tails and Virtual Connections between two Neos Networks devices providing point-to-multipoint connectivity.

The Customer is responsible for the capacity management of the NNI. The Customer oversubscribes the NNI at its own risk and no refund or Service Credits shall apply for any performance or availability issues arising in connection. Neos Networks reserves the right to refuse orders for Services connected to the NNI if the oversubscription on that NNI has been causing Network performance issues.

Access Tails provided over Neos Networks Ethernet Fibre between the PoP and the Customer Site are defined as On-Net. The Ethernet P2NNI will be provisioned as Protected as standard. Unprotected Ethernet may be available upon the Customer's request.

3. Ethernet over Fibre to the Cabinet/Premises (EoFTTC/P)

- 3.1. Ethernet over Fibre to The Cabinet ("EoFTTC") and Ethernet over Fibre to The Premises ("EoFTTP") are optional access methods provided via BT Wholesale, TalkTalk Business and Openreach.

- 3.2. Neos Networks will utilise the Openreach SoGEA (Single order Generic Ethernet Access) product which includes the underlying physical line for the EoFTTC delivery. Both SoGEA and GEA FTTP Openreach access products are delivered over shared infrastructure between the Customer Site and the Exchange. Neos Networks then delivers a dedicated VLAN over the Network for each Service.
- 3.3. EoFTTC and EoFTTP services are delivered as “wires only” – meaning that Neos Networks does not supply any additional equipment to that supplied by the third-party supplier of such Tail Circuits. Due to the effect of distance on the performance over copper the reported speeds may vary according to the distance between the Customer Site and the street cabinet. As such, EoFTTC is provided as a ‘best effort’ only service and no Service Credits shall apply.

Ethernet Terms

4. Service schedule

- 4.1. This Ethernet Service Schedule (“**Service Schedule**”) is effective as of the Effective Date of the Order Form between the Parties referencing this Service Schedule and incorporates by reference the General Terms executed or adopted by the Parties. Unless otherwise defined in this Service Schedule, capitalised terms in this Service Schedule shall have the definitions given to them in an Order Form or the General Terms.

5. Ethernet charges

- 5.1. Unless otherwise specified in the relevant Order Form:
- 5.1.1. Ethernet Services shall be charged via an Installation Charge and an Annual Rental Charge;
- 5.1.2. the Installation Charge shall be invoiced by Neos Networks on each relevant Service Commencement Date; and
- 5.1.3. the Annual Rental Charge shall be invoiced by Neos Networks quarterly in advance from the Service Commencement Date.

6. Additional Information

- 6.1. For Ethernet Services, the following specifications referenced in the Delivery section of the General Terms will apply:

- 6.1.1. Customer Apparatus - Minimum modem requirement: BT Openreach SIN 498 and/or 527.

- 6.1.2. Equipment - Point of Interconnect: 100/1000BASE-T Ethernet or 1000BASE-SX/LX.

6.2. If the Service entails the procurement of an Openreach service (whether directly or indirectly), the Customer must promptly notify Neos Networks and self-certify whether it is (or will be) using the Service for the purpose of aggregating FTTP to multiple homes and business premises from aggregation nodes (e.g. a street-based cabinet) (“**Aggregation**”). If the Service is (or will be) used for Aggregation, a surcharge (calculated from surcharge payable to Openreach plus a reasonable administrative charge) (the “**Aggregation Surcharge**”) shall be payable by the Customer, starting from the relevant Service Commencement Date.

- 6.3. The Customer acknowledges and agrees that if it fails to self-certify correctly or promptly, Neos Networks shall be entitled to levy the Aggregation Surcharge from the Service Commencement Date.

Service Level Agreement (SLA)

Service Levels

The following service levels are applicable for the Network. Where a tail provider or third-party supplier delivers part of the Services, Neos Networks’ liability will at no time exceed the published contractual liability of the tail provider or third-party supplier.

Section Ref:	Service Level	Ethernet Fibre	EoFTTC/P
7.2	Delivery	Committed Delivery Date	Committed Delivery Date
7.3	Network Fault – Target Time to Repair (note 1, 2, 3 and 5)	5 hours	8 hours
7.4	Availability Target	99.95%	99.95%

7.5	Capacity Change Request	48 hours	48 hours
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Note 1 - calculated from the end of the Notification Period

Note 2 - excluding fibre breakages (which will be cleared within 16 hours - except fibre breakages involving overhead fibre and subsea fibre cables)

Note 3 - includes Switch/Router faults

Note 4 - If Unprotected Ethernet is provided, then no Availability SLA will be provided and Capacity Change Requests are not available

Note 5 - There are no enhanced SLAs associated with resilient service orders. Each Tail Circuit in a resilient order will have SLAs applied as if they are two independent Tail Circuits

7.2. Delivery

7.2.1. In the event that Neos Networks fails to meet the Committed Delivery Date for orders then the Customer may claim compensation as detailed below (except in relation to the supply of Tail Circuits):

Working Days past Committed Delivery Date	Service Credits (percentage of Month's rental for the affected Service) note 1
1 - 5	5%
6 - 11	10%
12 - 30	25%
>30	50%

Note 1 calculated as 1/12th of the Annual Rental Charge

7.3. Network Fault

7.3.1. If Neos Networks does not meet the above Target Times for Repair for the Network, the Customer may claim Service Credits as follows:

Hours past Target Time to Repair	Service Credits
1	12% of one Month's rental for each hour or part thereof over the 5-hour mark (8 hours for EoFTTC/P) capped at 35% of the Month's rental

7.4.

Availability

7.4.1. Neos Networks shall use its reasonable endeavours to ensure that the Connection is available for use twenty-four (24) hours a day throughout each calendar year. Neos Networks shall design the Connection to provide an Availability of 99.95%. The calculation used is based on the recorded number of Service-Affecting Faults per Connection within the Measurement Period.

7.4.2. If the performance level of service on the Network is below 99.95% at the end of the Measurement Period (other than for Scheduled Outages or for a Force Majeure Event or as otherwise set out in the Agreement when Neos Networks shall have no liability), the Customer may claim Service Credits as follows:

Availability at end of Measurement Period	Service Credits (percentage of the annual rental charge of the affected Connection)
99.94% - 99.85%	5%
99.84% - 99.60%	7.5%
Less than 99.60%	10%

7.5.

Capacity Change Request

7.5.1. The Customer may submit a written request for Neos Networks to increase the bandwidth of any particular Connection (the "**Capacity Change Request**"). This excludes EoFTTC where it is not possible to increase capacity.

7.5.2. Neos Networks will acknowledge the Capacity Change Request and confirm whether the capacity is available to execute the Customer's requested bandwidth change. Neos Networks will, subject to the capacity limits and contractual time constraints of any associated Tail Circuits, arrange for the appropriate increase in capacity to the Customer's Connection.

7.5.3. The target response time to vary the bandwidth is forty-eight (48) hours from the Neos Networks acknowledgement being sent to the Customer. If the Customer has requested an increase in bandwidth and Neos Networks does not meet this target response time, the Customer may request the following compensation from Neos Networks:

Hours past target response	Service Credits (percentage of the annual rental charge of the affected Connection)
1	1%
2	2%
4	3%
More than 4	4%

7.5.4. The Customer invoice reflecting the change in bandwidth will be incorporated in the next quarterly invoice to be sent to the Customer following the relevant bandwidth change. The minimum duration of any Capacity Change Request will be one Month from the date of the change in bandwidth being affected.

7.5.5. The Customer may not request a decrease of bandwidth below the initial capacity requested by the Customer.

8. Fault Management

- 8.1. Faults may be reported to the NOC by the Customer on 0345 3053337 (or such other number as Neos Networks notifies the Customer) 24 hours a day, 7 days a week at which time a Fault Reference Number will be issued.
- 8.2. Neos Networks will in the Notification Period take reasonable steps to restore the Service if possible.
- 8.3. On notification of a fault by the Customer to Neos Networks, the Customer shall perform all necessary in-house tests to the demarcation point (being the service boundary on the Network) and shall co-operate fully with the NOC in order to locate any fault.
- 8.4. In the event of Neos Networks' normal point of contact not being able to respond satisfactorily, the escalation procedure(s) should be used and any requests from either Party for the escalation procedure(s) to be implemented should be initiated through the relevant contacts identified in the table below:

Level	Network Operations Personnel	Escalation
1	NOC	4 hours after initial fault is reported
2	Duty Operations Manager	1 hour after level 1 escalation

3	Head of NOC	3 hours after level 1 escalation
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Neos Networks operates a personnel roster system for escalation purposes and provides a series of Duty Officers for all three levels. Accordingly, the dedicated telephone number for Duty Officers is the NOC fault report number.

9. Service Credits

- 9.1. All claims for Service Credits under the Agreement must be submitted to Neos Networks within thirty (30) days of the failure to meet the specified service level.
- 9.2. Any Service Credits shall be paid in the form of a credit to the Customer's account, except in the event that the contract expires, in which case Neos Networks shall make payment following the termination of the Agreement.
- 9.3. Neos Networks' total aggregate liability to the Customer under this Service Level Agreement in any twelve (12) month period shall not exceed an amount equal to one Month's charges for the individual Service which has the Service-Affecting Fault (calculated as 1/12th of the Annual Rental Charge).
- 9.4. If attributable to the same fault, only one type of Service Credit may be claimed by the Customer. Service Credits will be the Customer's sole remedy in respect of any failure of Neos Networks to meet the service level.

10. Excused Outages

10.1. Planned maintenance

- 10.1.1. In maintaining the Service, Neos Networks may with reasonable notice request a temporary Outage or re-routing of the Service. Where reasonably possible Neos Networks will notify the Customer of the Outage or re-routing at least twenty-eight (28) days in advance and will co-operate with the Customer as to timing. If Neos Networks and the Customer cannot agree, then the decision by Neos Networks shall be final. Where notice has been given of such Outage or re-routing, the Customer will not be entitled to any Service Credits or compensation and lack of Availability will not be counted in any Measurement Period. The Customer acknowledges that if the planned maintenance is cancelled by the Customer on less than fourteen (14)

days' notice, Clause 26.6 of the General Terms shall apply.

10.1.2. Planned network maintenance or upgrades may be required from time to time. Notice will be given to Customers that may be affected. Neos Networks will use reasonable endeavours to carry out this work without disruption, but if Neos Networks and the Customer cannot agree the timing of the Outage or re-routing, Neos Networks' decision shall be final. Where notice has been given of such planned network maintenance or upgrades, the Customer will not be entitled to any Service Credits or compensation for resulting Outages and lack of Availability will not be counted in any Measurement Period.

10.1.3. The Customer shall provide Neos Networks with reasonable written notice of any planned works or maintenance they intend to perform which could impact service.

10.1.4. Neos Networks may, at its sole discretion, use an optical extension tail to extend the Ethernet Service reach and the optical extension tail may be amended and re-engineered at Neos Networks discretion as part of a Scheduled Outage.

10.2. Customer-responsible faults

10.2.1. Neos Networks is not responsible for any fault identified as attributable to Customer Apparatus, Customer power supplies or the action or inaction of the Customer's employees and/or agents. In such event reasonable costs (including engineer costs, travel costs and preparation costs) incurred by Neos Networks shall be recharged to the Customer.

10.2.2. Additionally, Neos Networks will quote its terms and conditions (including price) for any remedial work that is necessary to fulfil its obligations under the Agreement, but the provisions relating to Target Times to Repair shall not apply and any downtime occasioned by such Customer fault shall not be included in Availability measurements.

10.2.3. In the event of responsibility being the subject of dispute between Neos Networks and the Customer, then the decision of Neos Networks in this regard shall prevail.

10.3. Third-party-attributable faults

10.3.1. If a fault is identified as being attributable to a third party (i.e. neither the Customer nor Neos Networks), the fault shall be deemed to be the responsibility of Neos Networks, but no downtime will be included in Availability measurements. In such event Neos Networks will use all reasonable endeavours to restore the Service within the Target Time to Repair but will not be liable to pay the Customer Service Credits if it cannot do so because of any fault attributable to a third party.

10.3.2. Neos Networks' liability for Target Times to Repair, Availability of the Tail Circuit or Services and Changes in Bandwidth in respect of Tail Circuits or Services will at no time exceed the actual recovered amount from the third-party supplier of such Tail Circuits.

11. Definitions and interpretations

In the Agreement, unless the context otherwise requires, the capitalised terms shall have the following meanings:

"Access Tails" means the electronic communications network supplied by Neos Network to connect the Customer Site to the Network;

"Availability" means the time for which a Service is available. A Service shall be deemed unavailable if it is completely interrupted for greater than ten consecutive seconds;

"Connection" means an electronic communication circuit(s) to be supplied by Neos Networks for the delivery of Services pursuant to this Agreement. Such Connections shall be supplied as point to point only;

"Ethernet Virtual Connections or EVCs" means an association of two or more User Network Interfaces (UNIs) that limit the exchange of Service Frames to UNIs in the Ethernet Virtual Connection (EVC);

"Fault Reference Number" means the unique number issued when logging a fault with the NOC;

"Measurement Period" means periods of twelve (12) Months, the first being calculated from the Service Commencement Date;

"Month" means calendar month;

"NNI" means Network-to-Network Interface;

"NOC" means the Network Operations Centre sited at a Neos Networks' office location from where Network management functions are directed;

"Notification Period" means the period of 1 hour from the time a fault is reported to Neos Networks or an alarm is registered by the NOC;

"Off-Net" means being provided by a third party from the Customer Site or data centre up to the Service demarcation point on the Network;

"On-Net" means inside the demarcation point on the service boundary of the Network, including any provision using Access Tails;

"Outage" means an event or action (not attributable to the act or omission of the Customer or arising at the request of the Customer) which prevents or restricts the passage of electronic communications signals across any Connection;

"Protected Ethernet" means the wide area communication services supplied to the Customer are able to utilise two paths over which Ethernet frames can be passed for resiliency and the term "Protected" shall be construed accordingly;

"Scheduled Outage" means a loss of the Services for an agreed period, communicated to and agreed by the Customer a minimum of twenty-eight (28) days in advance;

"Service-Affecting Fault" means any fault originating on the Network which causes an interruption to the actual use of the Service which is not attributable solely to latency in excess of 10 milliseconds;

"Service Credits" means an amount that the Customer may claim where the specified service level has not been met;

"Tail Circuit" means the electronic communications network supplied by a third-party provider to connect the Customer Site to the Network;

"Target Time to Repair" means the target length of time to restore the Services which is measured from the end of the Notification Period registered by the NOC; and

"Unprotected Ethernet" means only one path is provisioned over which Ethernet frames can be passed and the term "Unprotected" shall be construed accordingly. A secondary Unprotected circuit would normally be ordered to provide both separacy and resiliency.