Lightpath

ETHERNET SERVICE ATTACHMENT

1. APPLICABILITY OF SERVICE ATTACHMENT AND SERVICE TYPES.

1.1 Applicability. This Ethernet Service Attachment sets forth the terms and conditions of Lightpath's Ethernet service (the "**Service Attachment**"), whereby Lightpath will provide Layer 2 connectivity with sub-50-millisecond resiliency over a scalable Ethernet connection for use solely by Customer (the "**Service**"). Unless otherwise defined herein, all capitalized terms in this Service Attachment will have the same meaning as defined in the Standard Service Agreement. By signing the Service Order, Customer agrees to the terms of this Service Attachment.

1.2 Service Types and Optional Features. Lightpath offers the following Ethernet Services: E-Line, V-Line, E-LAN, Ethernet Virtual Private Line, Ethernet Private Line, Private Ethernet Network, Class of Service and Protection Options as further defined below:

1.2.1 E-Line. E-Line Service provides dedicated virtual circuits, with security characteristics similar to traditional private line services, to provide point-to-point or point-to-multipoint connectivity. Lightpath provides a static, predetermined Ethernet Virtual Circuit ("**EVC**") that is provisioned through Lightpath's Service Network.

1.2.2 V-Line. V-Line Service provides dedicated virtual circuits, with security characteristics similar to traditional private line services, to provide point-to-point connectivity between a central hub location and multiple Customer Locations. Lightpath provides a static, predetermined EVC that is provisioned through Lightpath's Service Network. V-Line Service supports multiple applications via a single multiplexed port.

1.2.3 E-LAN. E-LAN Service provides multipoint-to-multipoint connectivity that extends the Local Area Network ("**LAN**") to a Wide Area Network ("**WAN**") to enable business-critical applications and data to travel seamlessly throughout the enterprise. E-LAN Service provides a single interconnection, with a hub aggregating all data traffic on a single network that links all Customer Locations.

1.2.4 Ethernet Virtual Private Line ("EVPL"). EVPL Service provides an EVC between two or more Customer Locations and supports the added flexibility to multiplex multiple services EVCs on a single User-to-Network Interfaces ("**UNI**") at Customer's hub or aggregation site.

1.2.5 Ethernet Private Line ("EPL"). EPL Service provides secure, high-performance network connectivity between two Customer Locations. EPL is a highly scalable service that enables Customer to connect its Customer Equipment using industry standard Ethernet UNI. EPL Service provides an EVC between Customer Locations that enables Customer to use any VLANs without coordination with Lightpath.

1.2.6 Private Ethernet Network ("PEN"). PEN Service provides connectivity for businesses with high bandwidth requirements and multiple locations. PEN Service enables Customer to connect physically distributed locations across a WAN as if they are on the same LAN. PEN Service provides VLAN transparency enabling Customer to implement their own VLANs without any coordination with Lightpath. PEN is a highly scalable service that enables customers to connect Customer Equipment using industry standard Ethernet UNI. PEN Service provides an EVC between Customer Locations that enables Customer to use any VLANs without coordination with Lightpath.

1.2.7 Class of Service ("CoS"). Lightpath offers CoS with Ethernet. CoS enables Customer to differentiate traffic by assigning bandwidth with various classes of network priority designated by Customer. If Customer elects CoS: (i) Customer's traffic must be marked by Customer in accordance with Lightpath's available classes of network priority; and (ii) Customer traffic will be prioritized in accordance with the assigned network priority. If Customer does not elect CoS, Customer's traffic will be treated with the default network priority level.

1.2.8 Enterprise Cloud Connect. Customer must have an active cloud provider account and configure the cloud connection within the cloud provider's portal in order to use Lightpath's Cloud Connect Service. Customer is solely responsible for: (i) Cloud Portal configurations to provision and activate the cloud connection; (ii) establishing necessary boarder gateway protocol ("**BGP**") peering to be compliant with cloud provider requirements; and (iii) perform all actions necessary to utilize the Service as may be required by cloud provider and Lightpath. Customer acknowledges and agrees that Lightpath is only responsible for the transport of the Service and all other issues will be directed to the cloud provider. Further, Customer authorizes Lightpath to provide certain information about the Customer's Service to the cloud provider in order provide the Cloud Connect Service, including installation, maintenance, repair account numbers.

1.2.9 Proactive Monitoring Advanced. This feature automatically creates a trouble ticket on behalf of the Customer when Lightpath detects that the local interface port on the Customer Equipment has experienced a Service Outage lasting five (5) minutes or more. In addition to notifying Customer of the creation of the Service Outage trouble ticket, Lightpath will provide periodic updates to the Customer on the progress being made in resolving the Service Outage.

1.3 Protection Options. Ethernet Service comes with various protection options as described below:

1.3.1 Level 1. Services subject to Level 1 are unprotected Services that have no physical, electrical, or optical redundancy or diversity. The minimum Customer Location requirements for 99.9% circuit reliability are:

a) Secure space for Service Equipment at each Customer Location with 24x7x365 access;
b) Dedicated electrical circuit for Service Equipment (i.e., the circuit has no other load from the Service Equipment to a circuit breaker) at each Customer Location from the public utility; and
c) For Service Equipment installed indoors, substantially dust free with temperature control that maintains temperature between 50 and 80 degrees Fahrenheit and humidity control that maintains relative humidity below 80%.

1.3.2 Level 2. Services subject to Level 2 are protected Services with two circuits (i.e., a primary circuit and a protected circuit), including, without limitation, diverse hand-offs, for network redundancy. The minimum Customer Location requirements for 99.99% circuit reliability are:

a) Secure space for Service Equipment at each Customer Location with 24x7x365 access;
b) Dedicated electrical circuit for Service Equipment (i.e. the circuit has no other load from the Service Equipment to a circuit breaker) at each Location from the public utility;
c) For Service Equipment installed indoors, substantially dust free with temperature control that maintains temperature between 50 and 80 degrees Fahrenheit and humidity control that maintains relative humidity below 80%; and
d) Lightpath (or Customer if the Parties agree) to install and maintain a minimum of four (4) hours of standby power.

1.3.3 Level 3. Services subject to Level 3 are fully protected Services with fully divergent path redundant circuits (i.e., a primary circuit and a protected circuit, each on paths fully diverse one from the other), including, without limitation, diverse hand-offs, for network redundancy. Further, Services subject to this Level 3 would have to provide from specific physical, electrical, and optical redundancy or diversity with a primary and a protection path that enables Lightpath to automatically restore and reroute the Service. The minimum Customer Location requirements for 99.999% circuit reliability are:

a) Secure space for Service Equipment at each Location with 24x7x365 access;
b) Redundant, dedicated electrical circuit at each Customer Location from the public utility (i.e., each power circuit is fed from a different circuit breaker panel and has its own circuit breaker);
c) For Service Equipment installed indoors, substantially dust free with temperature control that maintains temperature between 60 and 80 degrees Fahrenheit and humidity control that maintains relative humidity between 40% and 60%; and
d) Lightpath (or Customer if the Parties agree) to install and maintain a minimum of eight (8) hours of standby power and Customer will provide emergency power generation.

2. SERVICE USE AND RESTRICTIONS.

2.1 Demarcation Point. The Service is configured at designated speeds on a designated port(s) on the Service Equipment which will be the point of demarcation for providing the Service to Customer (the "**Demarcation Point**").

2.2 10% Rule. To the extent applicable, Customer acknowledges that Lightpath has no ability to determine whether the communications traffic carried by the Service is jurisdictionally interstate or intrastate. Customer agrees that the communications traffic to be carried by the Service Network will be jurisdictionally interstate pursuant to the Federal Communications Commission's mixed-use rule "10% Rule" (47 C.F.R. §36.154, 4 FCC Rcd. 1352). For communications traffic that is purely intrastate or falls within the 10% Rules, Customer will be required to sign a Private Line Jurisdiction Certification Form certifying that the total interstate traffic is less than ten percent (10%) and / or that Services is utilized only for intrastate traffic.

2.3 Utilities. Customer will make available to Lightpath adequate space, power, air conditioning and all other applicable utilities for Service Equipment at the Customer Location at its sole cost.

3. TECHNICAL SPECIFICATIONS.

3.1 Ethernet User-to-Network Interface. Lightpath Ethernet Services provides bidirectional, full duplex transmission of Ethernet frames using a standard IEEE 802.3 Ethernet interface. Lightpath implements ingress policies at Customer Equipment UNI interfaces to enforce subscribed bandwidth levels. Each ingress policing policy is created utilizing Committed Information Rate ("**CIR**") and excess information rate ("**EIR**") components.

3.2 Maximum Frame Size. Services support a Maximum Transmission Unit ("**MTU**") frame size of up to 8100, if available, to support untagged, tagged and Q-in-Q traffic with 802.1q or 802.1ad encapsulation types.

3.3 Service Level Objectives. Lightpath's target service level performance objectives for the duration of each calendar month in a year is set for in the table immediately below (the "**Service Level Objective**").

Metric	Service Level Objective (monthly average)
Service Network Availability – Level 1	99.9%
Service Network Availability – Level 2	99.99%
Service Network Availability – Level 3	99.999%
Service Network Latency	<10.0ms (roundtrip) within the New York Metropolitan Area ("NYMA"); <80 ms (roundtrip) other areas on the Core Network
Service Network Packet Delivery	99.0%
Service Network Frame Delay Variation	≤ 5 ms

4. SERVICE LEVEL AGREEMENT.

4.1 Service Outage. Subject to this Section 4 (including subsections), in the event of an interruption, delay, or outage in the transmission of the Services between the Demarcation Point and the Service Network (a "**Service Outage**"), Customer may request a service credit as set forth in the tables immediately below for the effected Service (each, a "**Service Credit**"). The calculation of a Service Outage will be deemed to begin upon the earlier of: (i) Lightpath's actual knowledge of the Service Outage, or (ii) Lightpath's receipt of notice from Customer of the Service Outage, less (iii) any time Lightpath is waiting for additional information. A Service Outage will be deemed to end when the Service is operational and in material conformance with the technical specifications detailed in Section 3 above, as documented by Lightpath's records. Notwithstanding anything to the contrary in the Standard Service Agreement, this Service Attachment or in any Service Order, in no event will a Service Outage be deemed to be or constitute a breach by Lightpath of the Standard Service Agreement, this Service Attachment or in any Service Order.

4.2 Service Network Availability. Service Network Availability is calculated as the total number of minutes in a calendar month less the number of minutes that the Service is unavailable due to a Service Outage ("**Downtime**"), divided by the total number of minutes in a calendar month.

Service Network Availability is calculated as follows:

$$\text{Service Network Availability (\%)} = 100\ \% - \left(\left(\frac{\text{Total Number of Minutes Unavailable per Month by ticket}}{\text{Total Number Days in Month x 24 hours x 60 minutes}} \right) \times 100 \right)$$

Level 1: (>99.9% Uptime): The Service Credit is as follows:

Length of Service Outage	Amount of Service Credit (% of MRC)
Less than 43.2 Minutes	No Credit
43.2 minutes up to 4 hours	10%
4 hours up to 8 hours	15%
8 hours up to 12 hours	20%
12 hours up to 16 hours	25%
16 hours up to 24 hours	35%
24 hours or greater	50%

Level 2: (>99.99% Uptime): The Service Credit is as follows:

Length of Service Outage	Amount of Service Credit (% of MRC)
Up to 4.32 minutes	No Credit
4.32 minutes to 30 minutes.	5%
>30 minutes to 1 hour	10%
>1 hour to 8 hours	20%
>8 hours to 16 hours	30%
>16 hours to 24 hours	40%
> 24 hours	50%

Level 3: (>99.999% Uptime): The Service Credit is as follows:

Length of Service Outage	Amount of Service Credit (% of MRC)
Up to 43 seconds	No Credit
>43 seconds to 4 minutes	5%
>4 minutes to 10 minutes	10%
>10 minutes to 2 hours	20%
>2 hours to 8 hours	40%
>8 hours	50%

4.3 Service Network Latency. Latency is the average roundtrip network delay, measured every five (5) minutes during a calendar month to adequately determine a consistent average monthly performance level for delay for each Service. The roundtrip delay is expressed in milliseconds ("**ms**"). Lightpath measures delay on an end-to-end basis using a standard sixty-four (64) byte ping from the Core Service Network to the Customer's network interface and back again. In the event the Service Network Latency is in excess of the Service Level Objective specified in Section 3.3 above, Lightpath will use commercially reasonable efforts to determine the source of such excess Service Network Latency and to correct such problem to the extent that the source of the problem is on the Core Service Network. If Lightpath fails to remedy such excess Service Network Latency within two (2) hours of being notified of any excess Network Latency by Customer and the average Network Latency for the preceding thirty (30) days has exceeded the Service Level Objective specified in Section 3.3 above, Customer will receive, at Customer's request, a Service Credit of ten percent (10%) of the MRC applicable to the affected Service for the period from the time of notification by the Customer until the average Service Network Latency for the preceding thirty (30) days is less than the Service Level Objective specified in Section 3.3 above. Customer may obtain no more than one (1) month Service Credit for any given month. The term "**Core Service Network**" means any Layer-3 equipment owned and operated by Lightpath that is managed in strict accordance with Lightpath network operation parameters.

4.4 Service Network Packet Delivery. Packet Delivery means the percentage of packets that are not successfully received compared to the total packets that are sent in a calendar month and is expressed as a ratio which is the percentage of packets that successfully traverse a round-trip connection relative to the total number of packets input (ingress) to the connection within the Core Service Network. In the event Packet Delivery is less than 99.0% of total packets sent in any given month, Lightpath will use commercially reasonable efforts to determine the source of such Packet Delivery loss and to correct such problem to the extent that the source of the problem is on the Core Service Network. If Lightpath fails to remedy such Packet Delivery loss within two (2) hours of being notified of any Packet Delivery loss by Customer and the average Packet Delivery for the preceding thirty (30) days is less than 99.0% Customer will receive, at Customer's request, a Service Credit of ten percent (10%) of the MRC applicable to the affected Service for the period from the time of notification by the Customer until the average Packet Delivery for the preceding thirty (30) days is equal to or greater than 99.0%. Customer may obtain no more than one (1) month Service Credit for any given month.

4.5 Service Network Frame Delay Variation. Frame Delay Variation means the variation in delay for two consecutive packets that are transmitted (one-way) from a Service Network origination point and received at a Service Network destination point. Lightpath measures a sample set of packets every five (5) minutes during a calendar month, and determines the average delay between consecutive packets within each sample set. The monthly Frame Delay Variation is calculated as the average of all measurements during such calendar month and is expressed in milliseconds. It is the variance in packet delay (in milliseconds) between two performance test packets as measured at the ingress and Customer's network interface.

Frame Delay Variation is calculated as follows:

Total # of measurements for a Service

The available Service Credit for Frame Delay Variation is as follows:

Length of Service Outage	Amount of Service Credit (% of MRC)
5 ms or less	No Credit
>5 ms	10%

4.6 Service Credits. Service Credits hereunder are calculated as a percentage of the MRC set forth in the Service Order, and may not be applied to NRC, usage charges, government fees, taxes, or surcharges, or any third party charges passed through to Customer by Lightpath. If an incident affects the performance of the Service and results in a period or periods of Service Outage, interruption, disruption or degradation in Service, entitling Customer to one or more credits under multiple Service Level Objectives, only the single highest credit with respect to that incident will be applied, and Customer will not be entitled to credits under multiple Service Level Objectives for the same incident. Service Credits will not be issued to Customer if Customer's account with Lightpath is in arrears. In no event will cumulative credits for any month exceed fifty percent (50%) of the MRC for the affected Service. Service Credits issued to Customer hereunder are Customer's sole and exclusive remedy at law or in equity on account of any Service Outage.

4.7 Service Credit Request. Customer must submit a written request to claim a Service Credit no later than thirty (30) days following the event which gives rise to Customer's right to request the Service Credit. Failure to request a Service Credit within such period will constitute a waiver of any claim for a Service Credit.

4.8 Service Outage Exclusions. Notwithstanding the foregoing, Customer will not receive any credit for a Service Outage or delay in performing repairs, arising from or caused, in whole or in part, by the following events:

(i) Customer's (including its Affiliates, agents, contractors and vendors) negligence, intentional act, omission, default and / or failure to cooperate with Lightpath in addressing any reported Service problems, including failing to take any remedial action in relation to a Service as recommended by Lightpath, or otherwise preventing Lightpath from doing so;
(ii) Failure on the part of Customer Equipment, end-user equipment or Customer's vendor's equipment;
(iii) Election by Customer, after requested by Lightpath, not to release the Service for testing and repair;
(iv) Lightpath's inability to obtain access required to remedy a defect in Service;
(v) Scheduled maintenance and emergency maintenance periods;
(vi) Scheduled upgrade of Service at the request of Customer;
(vii) Force Majeure Event;
(viii) Disconnection or suspension of the Service by Lightpath pursuant to a right provided under the Standard Service Agreement, this Service Attachment, or Service Order;
(ix) Lightpath's inability to repair due to utility safety restrictions;
(x) All Type II related service issues; and / or
(xi) No trouble found or where the fault of the trouble is undetermined.

5. MAINTENANCE AND REPAIR.

5.1 Lightpath Obligations. Lightpath will perform (or cause to be performed) maintenance and repair of the Lightpath Network, and Lightpath will provide, install, maintain, repair, operate and control Lightpath Equipment. Unless specified otherwise in a Service Order, Lightpath will have no obligation to install, maintain or repair Customer Equipment.

5.2 Service Issues. In the event that Customer experiences any Service-related issues, Customer may contact Lightpath through its Network Maintenance Center ("**NMC**") at +1 (866) 611 - 3434, which may be amended by Lightpath from time-to-time upon written notice to Customer. Upon receipt of notice of Service problems, Lightpath will initiate diagnostic testing to determine the source and severity of any degradation of Service. If there is a Service Outage, Lightpath and Customer will cooperate to restore Service. If Lightpath dispatches a field technician to Customer Location to perform diagnostic troubleshooting and the problem resides with the Customer's Equipment or facilities or the failure is due to Customer's or end-user's acts or omissions or the acts or omissions of Customer's or end-user's invitees, licensees, customers or contractors, Customer will pay Lightpath for any and all associated time and materials at Lightpath's then-current standard rates.

5.3 Scheduled Maintenance. Lightpath will endeavor to conduct (or cause to be conducted) scheduled maintenance that is reasonably expected to interrupt Service outside of regular business hours during the maintenance window of 12:00 midnight and 6:00 a.m. local time or, upon Customer's reasonable request, at a time mutually agreed to by Customer and Lightpath. Lightpath will use commercially reasonable efforts to notify Customer of scheduled maintenance that is reasonably expected to interrupt Service via telephone or e-mail, no less than ten (10) business days prior to commencement of such maintenance activities. Customer will provide a list of Customer contacts for maintenance purposes, which will be included on the Service Order, and Customer will provide updated lists to Lightpath, as necessary.

5.4 Emergency Maintenance. Lightpath may perform emergency maintenance in its reasonable discretion, with or without prior notice to Customer, to preserve the overall integrity of the Lightpath Network. Lightpath will notify Customer as soon as reasonably practicable following any such emergency maintenance activity that impacts the Service.

5.5 Other Emergency Actions. If Lightpath determines, in its sole discretion, that an emergency action is necessary to protect the Lightpath Network as a result of Customer's transmissions, Lightpath may block any such Customer transmissions that fail to meet

generally accepted telecommunications industry standards. Lightpath will have no obligation or liability to Customer for any claim, judgment or liability resulting from such blockage. Lightpath will notify Customer as soon as practicable of any such blockage. The Parties agree to mutually cooperate to resolve the underlying cause of the blocking, comply with generally accepted telecommunications industry standards and restore the transmission path as soon as reasonably possible, with a completion goal of forty-eight (48) hours.