Ethernet Service Level Agreement

This Service Level Agreement (SLA) sets forth the Service Levels for the Massive Ethernet Products and services, including Massive Networks Ethernet Access Services (E-Access), Massive Networks Ethernet Virtual Private Line Services (EVPL), Ethernet Private Line Services (EPL).

I. **Network Definitions The following terms are defined for the purposes of this Service Schedule:**

1. **"Customer Start Date" means the date by which Massive Networks will install Service. The Customer Start Date is defined in the MSA that**

2. **"On-Net" means Service provided on the network operated and/or controlled by Massive Networks between two locations that are served directly by Massive Networks operated and controlled fiber and Massive Networks operated and controlled equipment. Services that are not On-Net are "Off-Net".**

3. **"Protected" means any Service that has a Networks protection scheme utilized, defined and controlled by Massive Networks, that allows traffic to be fail-over or re-routed in the event of a fiber cut or equipment failure. Services which are not Protected are "Unprotected." Except for EVPL Service, which is always configured as Protected, Protected Services under this Schedule shall be designated as such in an Order.**

4. **"Unavailable" or "Unavailability" means Ethernet port (or the Service directly associated with such port) downtime.**

5. **"MRC" Monthly Recurring Charge on the customers invoice for the service(s) defined in the directly affected by this Service Level Agreement.**

II. Description of Service. EPL, EVPL, E-Access EVPL and E-Access EPL

1. **Ethernet Private Lines (EPL) are port based point-to-point circuits that delivery a high degree of transparency for service frames between standard 10/100/1000 Mbps interfaces. Metro EPL Service is provided in the same metropolitan market with bandwidth ranges from 3Mbps to 10Gbps. Intercity EPL Service is between two markets with bandwidth ranges from 10 Mbps to 1 Gbps. EPL is offered in a Protected or Unprotected configuration.**

2. **Ethernet Virtual Private Lines (EVPL) are point to point circuits that offer a lower degree of transparency for service frames, but can be ordered as VLAN aware or bundled configuration. EVPL is made up of at least two end user locations, also known as User Network Interfaces (UNIs) and at least one Ethernet Virtual Connection (EVC). In the VLAN aware configuration EVPL can be used as a hub and spoke architecture. EVPL is always delivered in a Protected configuration. Each UNI and EVC is priced separately and UNI is available as a 100Mbps, 1Gbps, or 10Gbps Ethernet port and EVCs are available in increments from 2Mbps to 6Gbps. As an optional Service feature, Customer may (at additional cost) subscribe to Performance Assurance or Enhanced Management in conjunction with the EVPL Service; these features provide end to end reporting and SLA's via the customer portal for the following statistics: data delivery, latency and jitter. The provision of Performance Assurance and Enhanced Management are subject to the "Performance Assurance Enhanced Management Supplement" to this Service Schedule, a copy of which will be made available to Customer upon request.**

3. **Ethernet Access Service (E-Access) is point-to-point circuits between an External Network-to-Network Interface (ENNI) on one side and a UNI or second ENNI on the other side. E-Access ports are connected with E-Access Operator Virtual Connections (OVCs), which are available at a variety of capacities, regardless of the platform or device that enables them. E-Access resembles a hub and spoke architecture. The ENNI provides the "hub" for the OVCs (which act as the spokes) via an S-VLAN tag and allows for "Q-in-Q," or stacked, tagging that recognizes that there is more than one layer of VLAN tags. The ENNI is available as a stand-alone Service, without a corresponding OVC. The OVC is available only with a Protected configuration, is available in various bandwidth increments ranging between 2Mbps to 6Gbps and may be ordered as: (a) a port-based private line (a/k/a EPL) with limited but dedicated line rate speeds; or (b) a transparent shared or dedicated Service (a/k/a EVPL) available at many speed intervals.**

4. **UNI The UNI is available as a 100Mbps, 1Gbps, or 10Gbps Ethernet port and may be ordered as a transparent or multiplexed interface. The ENNI is available as a 1Gbps or 10Gbps Ethernet port and may be ordered with a single or dual hand-off. A dual hand-off is provisioned using LACP protocol, in an active/standby configuration.**

III. Services from Others.

1. **Where Service is terminated Off-Net, Customer will provide Massive Networks with**
   a. **circuit facility assignment,**
   b. **firm order commitment and**
   c. **the design layout records necessary for Massive Networks to make cross-connections to the Off-Net carrier.**
2. **Massive Networks charges assume the following for Off-Net service:**
   a. **Off-Net Services will be available from Massive Networks selected Off-Net service provider and will be terminated at the minimum point of entry (MPOE) pre-determined by the Off-Net provider. If these assumptions are incorrect, additional charges may apply to either the Off Net component or, in the case of MPOE extensions, for inside wiring provided by Massive Networks. Customer will provide required inside wiring if the Off-Net provider does not or cannot perform required inside wiring.**

IV. Service Levels.

1. **Availability Service Level. In the event that a Massive Ethernet Products Service becomes Unavailable for reasons other than an Excused Outage, Customer will be entitled to a service credit off of the MRC for the affected Service based on the cumulative Unavailability of the Service in a given calendar month as set forth below:**
2. **and services, including Massive Networks Ethernet Access Services (E-Access), Massive Networks Ethernet Virtual Private Line Services (EVPL), Ethernet Private Line Services (EPL).**
   a. **For Cumulative Unavailability of less than 30 Seconds.**
      i. **No Credit**
   b. **For Cumulative Unavailability of Greater than 30 Seconds.**
      i. **A credit equal to the percentage of Unavailable Service time in a given month.**

   c. **Data Delivery, Latency, and Jitter Service Levels. Massive Networks's Service Levels are set forth below. The Pop to Pop Service Levels are based on monthly average performance between nodes on Massive Networks's Ethernet network. Customer will be entitled to a service credit (as set forth in Table C below) off of the MRC for the affected Service locations for the Measurement Parameter(s) not met for reasons other than an Excused Outage. Customer will not be entitled to credits under the Packet Delivery, Latency, or Jitter Parameters for the affected Service where such failure is related to Unavailability under Section 4(B) above.**

SLA Zone	Measurement Parameter	A Class of Service Voice Classes Video Classes	B Class of Service	C Class of Service
Intra US	Average Packet Delivery	99.99%	99.95%	99.90%
	Average Two Way Latency	45 ms	45 ms	45 ms
	Jitter (one way)	3 ms	N/A	N/A
Intra EU and EU - US	Average Packet Delivery	99.99%	99.95%	99.90%
	Average Two Way Latency	City Pair	City Pair	City Pair
	Jitter (one way)	<10 ms	N/A	N/A
Rest of World	Average Packet Delivery	99.90%	99.80%	99.50%
	Average Two Way Latency	City Pair	City Pair	City Pair
	Jitter (one way)	Regional	N/A	N/A