



## **Metro Ethernet – Service Descriptions**

### ISI Metro Ethernet Service

(A) ISI Metro Ethernet Service is a high-speed packet transport that is based on Ethernet transmission parameters. ISI Metro Ethernet Service provides various transport capabilities that range from 10 Mbps through 10 Gbps with capabilities for basic, premium, dedicated and virtual arrangements that may be used to meet individual customer needs.

(B) ISI Metro Ethernet Service signals meet IEEE 802.3, 802.3u, or 802.3z standards. ISI Metro Ethernet Service also uses 802.1Q VLAN tagging and stacking for certain service configurations contained herein.

(C) ISI Metro Ethernet Service technical requirements for interfaces with customer premises equipment (CPE) are contained in ANSI/IEEE 802.3-2002 Specifications.

(D) The rates and charges set forth in ISI Metro Ethernet Pricing Schedule for ISI Metro Ethernet Service provide for the furnishing of service in specific metropolitan areas where suitable Company facilities are available. In locations where ISI Metro Ethernet Service is not available, special construction charges may apply.

(E) A LAN (local area network) is a communications network spanning a limited geographical area. A LAN connects computers and other peripheral equipment for data communications purposes within a building or campus environment.

(F) A VLAN (virtual local area network) is a logical grouping of Metro Ethernet connections that allows data transmission between such connections to occur as if all connections are on the same physical LAN.

(G) Metro Ethernet is a service where Local Area Networks (LANs) send bidirectional Ethernet traffic to other LANs on an Ethernet Wide Area Network (WAN). Ethernet is one of the most widely deployed LAN/WAN standards. ISI Metro Ethernet Service supports IEEE Standard 802.3, 802.3u and 802.3z transmission standards.

(H) A Metro Ethernet Customer Network is defined as the set of interconnected Metro Ethernet connections assigned to the same VLAN within the ISI core network. Premium Connections that include the Q-Forwarding optional feature described in (O) and Virtual Connections that include the VLAN Aggregation optional feature described in (P) following may be part of more than one Metro Ethernet Customer Network.

(I) A Basic ISI Metro Ethernet Service Connection provides 10 Mbps, 100 Mbps and 1 Gbps Ethernet capabilities that are a part of a ISI Metro Ethernet Service network within a metropolitan area. Basic ISI Metro Ethernet Service is a best effort service with service capabilities that are affected by overall traffic on the Basic ISI Metro Ethernet Service network and is suitable for data transmission only.

A Basic ISI Metro Ethernet Service connection operating at any of these speeds is capable of interconnecting with other Basic ISI Metro Ethernet Service Connections that are operating at any of these speeds in the same metropolitan area.

A Basic ISI Metro Ethernet Service connection provides data channel transport that connects customer equipment ports from the ISI Metro Ethernet Service POP associated with the Basic ISI Metro Ethernet Service Connection.



Customer locations with no existing connectivity to the Basic ISI Metro Ethernet Service POP may also require ISI Metro Ethernet Service Additional Mileage charges.

(J) A Premium ISI Metro Ethernet Service Connection provides 10 Mbps, 10+ Mbps, 100 Mbps, 100+ Mbps, 1000 Mbps, and 1GE Ethernet capabilities that are a part of a ISI Metro Ethernet Service network within a metropolitan area. Premium ISI Metro Ethernet Service provides the ability to order Ethernet Service with improved service characteristics to meet customer needs regarding the assurance of bandwidth availability.

Premium ISI Metro Ethernet Service provides customer capabilities to assure service characteristics via ordering a Committed Bandwidth (CBW). A CBW is the minimum bandwidth across the ISI Metro Ethernet Service network within a metropolitan area between a customer's Premium ISI Metro Ethernet Service locations.

Premium ISI Metro Ethernet Service Connections are available with Fixed, and Burst capabilities unless specified otherwise. With the Fixed arrangement, Premium ISI Metro Ethernet Service Connections will have the bandwidth ordered (e.g., 10 Mbps) available across the ISI Metro Ethernet Service network. With the Burst arrangement, Premium ISI Metro Ethernet Service Connections will have the ability to send burst of data above their CBW rate, if network capacity is available. For example, a 10 Mbps, a 20 Mbps and a 50 Mbps Connection may Burst up to 100 Mbps, while a 100 Mbps, a 200 Mbps and a 500 Mbps Connection may Burst up to 1 Gbps.

Note 1: And as alternatively set forth in 7.4.32.(A)(5) and (6).

Note 2: Premium Connections at 1000 Mbps, and 1GE are available only as Fixed arrangements (i.e., .Burst. capability is not available).

A Premium ISI Metro Ethernet Service Connection operating at any of these speeds is capable of interconnecting with other Premium ISI Metro Ethernet Service Connections that are operating at any of these speeds in the same ISI Metropolitan Service Area.

A Premium ISI Metro Ethernet Service Connection provides data channel transport that connects customer equipment ports from the ISI Metro Ethernet Service POP associated with the Premium ISI Metro Ethernet Service Connection.

(K) A Dedicated ISI Metro Ethernet Service Connection provides 100 Mbps and 1 Gbps point-to-point Ethernet capabilities that are part of an ISI Metro Ethernet Service network within a metropolitan area. A Dedicated ISI Metro Ethernet Service Connection operating at either of these speeds is only capable of interconnecting with one other Dedicated ISI Metro Ethernet Service Connection in the same metropolitan area.

A Dedicated ISI Metro Ethernet Service Connection provides data channel transport that connects customer equipment ports from the ISI Metro Ethernet Service POP associated with the Dedicated ISI Metro Ethernet Service Connection. Customer locations with no existing connectivity to the Dedicated ISI Metro Ethernet Service POP may also require ISI Metro Ethernet Service Additional Mileage charges.

(L) A Virtual ISI Metro Ethernet Service Connection provides 10 Mbps, 10+ Mbps, 100 Mbps, 100+ Mbps, 1000 Mbps, and 1GE Ethernet capabilities that are a part of an ISI Metro Ethernet Service network within a metropolitan area.



Virtual ISI Metro Ethernet Service provides the ability to order Ethernet Service where a single customer connection can support multiple applications with varying Quality of Service (QoS) features and Classes of Service.

Virtual ISI Metro Ethernet Service provides customer capabilities to support different Classes of Service (CoS) (i.e., Real-Time, Interactive, Business Critical and Best Effort as described herein over the same Connection and offers customers increased flexibility to match bandwidth to their real needs for voice/data/video applications on each Connection. The customer orders the percentage of their Virtual ISI Metro Ethernet Service Connection bandwidth that will be allocated for each class of service.

For each Virtual Connection, the customer's bandwidth will be limited to the fixed speed associated with each CoS level specified in the CoS profile selected for the Virtual Connection.

A Virtual ISI Metro Ethernet Service Connection operating at any of these speeds is capable of interconnecting with other Virtual ISI Metro Ethernet Service Connections that are operating at any of these speeds in the same metropolitan area.

A Virtual ISI Metro Ethernet Service Connection provides data channel transport that connects customer equipment ports from the ISI Metro Ethernet Service POP associated with the Virtual ISI Metro Ethernet Service Connection.

Customer locations with no existing connectivity to the Virtual ISI Metro Ethernet Service POP may also require ISI Metro Ethernet Service Additional Mileage charges.

(M) ISI Metro Ethernet Service Additional Mileage charges associated with an ISI Metro Ethernet Service Connection apply when the the customer premises requires connectivity to the ISI Metro Ethernet Service POP from a third party, or through existing ISI fiber optic infrastructure. The associated ISI Metro Ethernet Service serving the customer premises is subject to additional mileage and/or facility charges associated with the delivery of the ISI Metro Ethernet Service.

ISI Metro Ethernet Service Additional Mileage charges apply to Basic, Premium, Dedicated and Virtual ISI Metro Ethernet Service based on the service's speed and the total distance associated with the data channel. The ISI Metro Ethernet Service Additional Mileage Charge is based on the distance the total data channel mileage falls into.

(N) Priority Plus is an optional feature available to customers with Premium ISI Metro Ethernet Service. Priority Plus provides the customer with the ability to prioritize their traffic in accordance with a predefined hardware queue model approach. With this option, customers will assign priority values to their data and higher-priority data will be transmitted first. Priority Plus service traffic is limited to a small subset of the total Committed Bandwidth (CBW) traffic and is marked for expedited handling within the Metro Ethernet Service.

Customers that desire Priority Plus must establish it for all of their Premium ISI Metro Ethernet Service Connections within that Metro Ethernet Customer Network.

(O) Q-Forwarding is an optional feature available to customers with Premium ISI Metro Ethernet Service. Q-Forwarding provides VLAN aggregation across a common physical connection. This feature supports customer aggregation of traffic from multiple Metro



Ethernet Customer Networks (referred to as VLANS). This aggregated traffic can be transported back to a central location and across a common Metro Ethernet Service Connection (referred to as the .aggregation. connection). Q-Forwarding utilizes IEEE 802.1Q VLAN Tagging procedures.

With Q-Forwarding, special technical considerations set forth herein must be taken into account to determine the customer's CBW cross their ISI Metro Ethernet Network.

The Q-Forwarding Service Establishment Charge is a charge to provision a Premium Metro Ethernet Connection with the Q-Forwarding feature and identify it as an "aggregation" connection.

The Q-Forwarding Network Assignment Charge is a charge to provision each Metro Ethernet Customer Network to the Q-Forwarding aggregation connection. The Q-Forwarding Network Assignment Charge applies for each VLAN connected to the Q-Forwarding aggregation connection.

VLAN Aggregation is an optional feature available to customers with Virtual ISI Metro Ethernet Service. VLAN Aggregation provides VLAN aggregation across a common physical connection. This feature supports customer aggregation of traffic from multiple Metro Ethernet Customer Networks (referred to as VLANS) comprised of Virtual Connections. This aggregated traffic can be transported back to a central location and across a common Virtual Metro Ethernet Service Connection (referred to as the "aggregation" connection). VLAN aggregation utilizes IEEE 802.1Q VLAN Tagging procedures.

The VLAN Aggregation Service Establishment Charge is a charge to provision a Virtual Metro Ethernet Connection with this feature and identify it as an "aggregation" connection.

The VLAN Aggregation Network Assignment Charge is a charge to provision each Virtual Ethernet Customer Network to the "aggregation" connection. The VLAN Aggregation Network Assignment Charge applies for each VLAN connected to the "aggregation" connection.

Metro Ethernet Reporting is an optional feature available to customers with Premium or Virtual ISI Metro Ethernet Service. Metro Ethernet Reporting provides customers a view into their ISI Metro Ethernet Service network via the use of a web interface and security card. Metro Ethernet Reporting provides alarm surveillance, service level agreement reporting and performance reporting for the various network components that comprise the customer's ISI Metro Ethernet Service network.

This feature is only available to customers purchasing Premium or Virtual ISI Metro Ethernet Service.

Customers who subscribe to Metro Ethernet Reporting must monitor their entire ISI Metro Ethernet Network. The Metro Ethernet Reporting Charge is applicable for each Premium or Virtual Metro Ethernet Service Connection.

The Metro Ethernet Reporting Service Establishment Charge is a nonrecurring charge that applies to initially establish a new Metro Ethernet Service customer account. A customer with an existing Metro Ethernet Reporting customer account from another ISI jurisdiction may re-use that customer account.



All customers purchasing Metro Ethernet Reporting must have a web interface that will allow the customer to access and monitor their network via the web. Each web interface provides for one concurrent access. Additional concurrent accesses will require additional web interfaces. An initial web interface (Web Interface Charge - First) is provided with the initial establishment of a customer account. A monthly charge and a nonrecurring charge are applicable for each additional web interface requested for a customer account (Web Interface Charge, Each Additional).

A security ID is required to access a web interface. Each security ID can only be used for a single concurrent access and can be associated with only one web interface. A Security ID Charge will apply for the initial and additional IDs requested and for the issuance of additional IDs to replace lost IDs. A nonrecurring charge is applicable per security ID requested.

ISI Metro Ethernet Service Customer networks comprised of Premium Connections or Virtual Connections with Metro Ethernet Reporting are provided Service Level Agreements (SLAs) for the Company's repair and performance commitments for this service. Credits are provided for missed commitments on such service. The specific SLA commitments and credits applicable are set forth herein for Premium Connections and for Virtual Connections.

Subsequent to its initial installation, a customer may request to reconfigure or change an ISI Metro Ethernet Service Connection. The Service Reconfiguration Charge or System Reconfiguration Charge will be the nonrecurring charge applicable for such a request; the appropriate nonrecurring charge will be based upon the reconfiguration or change requested.

For each Virtual ISI Metro Ethernet Connection the customer must decide the mix of applications that will be supported on that Connection, the CoS mix that Virtual Connection must support, and the percentage of bandwidth to be assigned for each CoS (i.e., build a CoS profile for each Virtual Connection). The customer's bandwidth will be limited to the fixed speed associated with each CoS level. Therefore, total bandwidth available to support transmission of a specific CoS will depend upon the size of the customer's Connection and the specific CoS percentage the customer selected for that Connection.

A customer may request a single CoS or up to four CoS to build the CoS Profile for a Virtual Connection. The customer determines the percentage bandwidth each CoS selected should be of the total Virtual Connection's bandwidth. The sum of the percentages for each CoS selected for a Virtual Connection must equal 100%. Additionally, the combined CoS bandwidth percentages selected in a customer's CoS Profile for Real-Time CoS plus Interactive CoS may not exceed 50%, except where the customer selects the 70% Real-Time CoS bandwidth percentage and has no Interactive traffic.

A customer may select different CoS profiles for different Virtual Connections that share the same network VLAN, or Virtual Connection network arrangement. However, technical limitations exist as discussed in TR-73632 that limit the total number of



different CoS profiles that can be utilized in a single Virtual Connection network arrangement.

The CoS and percentage bandwidth selected for a Virtual Connection will define the applications that can be supported and its Quality of Service (QoS) attributes such as traffic priority, latency, packet loss rate, etc. QoS attributes are defined for each CoS. Each Virtual Connection will support Ethernet traffic representing one or more applications and CoS. Virtual Connections support the four following CoS:

- **Real-Time:** This CoS supports VoIP applications. The Real-Time CoS is supported by a low latency queue. The Low Latency Queuing (LLQ) feature in the Ethernet network is used for support of the Real-Time CoS.
- **Interactive:** This CoS supports interactive Video applications. The Interactive CoS is policed to a maximum bandwidth.
- **Business Critical:** This CoS supports mission-critical business data applications. These applications tend to be data specific and may include medical imaging, electronic funds transfer, medical records transfer, etc.
- **Best Effort:** This CoS is the default CoS for all other traffic that is not defined as Business Critical, Real-Time or Interactive. Traffic that does not match the other CoS will be mapped as Best Effort. Traffic with the Best Effort CoS will have the lowest priority on the network and will support lower priority data applications, such as email and file transfer protocol (FTP). Each customer packet from a Virtual Connection will be classified and assigned to a specific CoS by methods identified herein.

(U) Automatic Protection Switching (APS) is an optional feature available, except as specified otherwise herein, to customers with a Basic, Premium or Virtual ISI Metro Ethernet Service Connection. The APS feature provides customers with the option of having data channel (i.e., facilities from the customer premises to the ISI Metro Ethernet Service POP) survivability through the use of a secondary transport path that is diverse from the path provided with their primary Metro Ethernet Connection. This secondary transport path (i.e., data channel) is provided for a specific Metro Ethernet Connection (i.e., the primary) with the selection of the APS feature which then provides the customer with complete path protection.

With APS, the primary Metro Ethernet Connection's data channel is monitored for threshold violations or path failures with a fail-over to the secondary data channel path provided via the APS feature. The APS data channel is checked periodically to ensure its availability if a failure of the primary Metro Ethernet Connection's data channel occurs. APS may be ordered as a structurally diverse transport path (Structural Protection) or a route diverse transport path (Route Protection). Structural Protection APS is defined as the APS facility and the primary Metro Ethernet Connection facility being in separate sheaths in separate structures located along the same route (e.g., underground/underground, buried/underground, aerial/underground, aerial/buried, buried/buried, and aerial/aerial), or along different routes at the Company's discretion.



Route Protection APS is defined as the APS facility being in a separate sheath within alternate underground, aerial or direct buried structures that are run along separate physical paths from the facilities associated with the primary Metro Ethernet Connection. No precise distance separation is specified between the paths; although the separation is sufficient to preclude one disruptive event from affecting both routes.

The APS feature is billed based upon the actual total route miles in a customer's specific Structural Protection APS or Route Protection APS design as determined by the Company. The term "route miles" is defined for this application to be the actual physical distance or length (not airline mileage), rounded up to the next whole mile, of the unique APS facility designed for each individual customer premises.

Total route miles are measured between the customer premises and its serving POP, plus route miles between the serving POP and any intermittent POPs in the path designed to reach the ISI Metro Ethernet POP associated with the primary Metro Ethernet Connection (i.e., the POP where the ISI Metro Ethernet switching equipment is located).

The APS rate element provides the alternate data channel transport and APS equipment in the ISI Metro Ethernet Service POP associated with the primary Metro Ethernet Connection. Actual total route mileage for the customer's APS design is determined from a Service Inquiry. The route mileage determined from this Company Service Inquiry is used for billing purposes and is the sole determinant of such mileage (i.e., not subject to dispute).

### **Service Level Agreement for Premium ISI Metro Ethernet Service**

Customer networks with Premium ISI Metro Ethernet Service and Metro Ethernet Reporting are provided Service Level Agreements (SLAs) as summarized herein. ISI Metro Ethernet Service SLAs outlined herein specify the Company's repair and performance commitments for Metro Ethernet Reporting customers with Premium Metro Ethernet Connections. Details of the technical measurements and performance results methodologies for each commitment are provided in ISI Technical Reference TR-73632. In accordance with the following conditions, credits are available for missed commitments to customers purchasing Premium ISI Metro Ethernet Service with the Metro Ethernet Reporting feature. Credits only apply for portions of service provided by the Company.

The following service measurements will outline the service levels the Company will deliver to Metro Ethernet Reporting customers with Premium Metro Ethernet Connections:

#### Repair Commitment:

- ISI Metro Ethernet Service Time-to-Repair

#### Network Service Level Commitments:

- ISI Metro Ethernet Service Core Network Availability
- ISI Metro Ethernet Service Core Network Latency

The Repair Commitment is measured on a per occurrence basis for each ISI Metro Ethernet Connection. A Fault Report is produced through the Metro Ethernet Reporting



system that aids identification of potential outage durations upon which credits may be requested.

The Network Service Level Commitments are measured on the monthly performance of the Metro Ethernet core network during a specific calendar month. An SLA Report is produced thru the Metro Ethernet Reporting system that provides details of missed Network Service Level Commitments upon which credits may be requested based upon a specific calendar month's performance results.

The Company's performance measurement data for the Repair Commitment and Network Service Level Commitments will be collected and calculated utilizing the Company's internal processes as set forth in ISI Technical Reference TR-73632. The Company's calculation of its performance shall be the sole determinate of the Company's obligation to provide a credit for a missed performance commitment.

### **SLA Definitions –**

#### ISI Metro Ethernet Service Time to Repair

- ISI Metro Ethernet Service Time-To-Repair measures the outage duration on a customer's ISI Metro Ethernet Connection. This measure will require the customer to report the problem to the ISI repair center.
- The repair interval will start with the time the trouble ticket is created and end when the fault is re-mediated. The Service Level Commitment measurement will be based on each individual trouble ticket for a customer's connection. Time for scheduled maintenance windows (as set forth in 7.4.32(A)(3)) does not count towards SLA threshold. ISI Metro Ethernet Service Network Availability
- ISI Metro Ethernet Service Network Availability measures the percentage of time during a calendar month that the customer's service is unavailable on the core network. The core network is defined as being from the Ethernet switch serving the customer's A-end to the Ethernet switch serving the customer's B-end. Customer networks that do not span more than one switch in the core network are not eligible for the Network Availability SLA, and one will not be provided.
- This Service Level Commitment will be calculated by measuring and summing the outage for each core network component used by the customer, divided by the total number of components, times the total service time for a particular calendar month.
- Excluded from the outage time and service time are scheduled maintenance windows (as set forth in 7.4.32(A)(3)) and time the network was unavailable due to circumstances outside the Company's control (as set forth in 7.4.32(C)(3)(b)).

#### ISI Metro Ethernet Service Network Latency

- ISI Metro Ethernet Service Network Latency measures average one-way delay in milliseconds within the core network.
- The core network is defined as being from the Ethernet switch serving the customer's A-end to the Ethernet switch serving the customer's B-end. Customer networks that do not span more than one switch in the core network are not eligible for the Network Latency SLA, and one will not be provided.



- This Service Level Commitment will be calculated by averaging the measured latency of simulated traffic within the Metro Ethernet Customer Network (i.e., between each pair of connections) during a calendar month.

**The Company's Service Level Commitments for Premium ISI Metro Ethernet Service are as follows:**

- ISI Metro Ethernet Service Time-To-Repair. 4 hours or less
- ISI Metro Ethernet Service Network Availability. 99.9% or higher
- ISI Metro Ethernet Service Network Latency. 55 milliseconds or less

**SLA Restrictions –**

The Company will implement SLA provisioning restrictions that will define customer network design requirements and limitations to ISI's commitment to meet Service Levels for ISI Metro Ethernet Service. The customer network design requirements are as follows:

- A customer must subscribe to the Metro Ethernet Premium Service with Metro Ethernet Reporting to receive credits for missed Service Level Commitments.
- Credits are not provided for partial month service.
- A customer's account must be current to receive a credit.

SLA Credits do not apply when any stated objective is not met because the Company does not have control over the circumstances causing the objective to be missed. Situations over which the Company does not have control include, but are not limited to, the following:

- any act, any omission or negligence on the part of the customer, any other customer or any third party, or of any other entity providing a portion of the service,
- labor difficulties, governmental orders, civil commotions, acts of civil or military authority, embargoes, epidemics, declared National Emergencies, criminal actions against the Company, war, terrorist acts, riots, insurrections, fires, explosions, nuclear accidents, power blackouts, acts of God (including, but not limited to, earthquakes, floods or unusually severe weather) or other circumstances beyond the Company's control,
- the customer's premises equipment, and
- unavailability of the customer's facilities and/or equipment including customer-provided power and environmental conditions for ISI-owned and operated equipment located on the customer's premises.

The Customer must request a credit within one month of the Company missing an ISI Metro Ethernet Service Level Commitment. A customer request for a Network Service Level SLA credit must be submitted on a standard request form issued by the Company that includes the month the SLA commitment was missed, accurate identification of the affected circuit, and the observed measurement of the specific SLA that was missed. A customer request for a Repair SLA credit must be submitted on a standard request form issued by the Company that includes the month the SLA commitment was missed,



accurate identification of the affected circuit, and the trouble ticket number of the repair request.

The Company will investigate customer requests for any SLA credits to determine the cause of any performance failures reported by the customer. The Company will investigate the customer's request over a period of up to 45 calendar days.

The 45-day period will begin when the customer makes the request for credit with their ISI Sales Representative.

SLA credits will be provided to the customer if the Company determines that the Company had control over the circumstances causing the failure.

### **SLA Credits for Premium Connections with Metro Ethernet Reporting –**

The following credits will apply when the Company misses a Service Level Commitment (each credit is described in (a) thru (c) following):

(a) ISI Metro Ethernet Service Time-To-Repair:

- 0 to 4 hours per incident: No Credit
- Over 4 hours to 24 hours per incident: A credit equal to 3/30 of the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection
- Each additional 24-hour period, per incident: Credit an additional amount equal to 3/30 of the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection

(b) ISI Metro Ethernet Service Network Availability: A credit equal to 3/30 of the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection

(c) ISI Metro Ethernet Service Network Latency: A credit equal to 3/30 of the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection

### **SLA Credits for Metro Ethernet Reporting –**

The SLA credit amount will be determined by applying the credits outlined preceding to the rate elements or total billed revenues specified following.

The total credits issued for all SLAs for a specific ISI Metro Ethernet Service Connection during a single bill period may not exceed the total monthly recurring charges billed for all the rate elements associated with that ISI Metro Ethernet Service Connection. Credits are not provided for partial month service.

(a) ISI Metro Ethernet Service Time-To-Repair Credit. The Service Level Commitment measurement will be based on each individual trouble ticket for a customer's connection. Multiple trouble tickets on the same day for the same customer connection will only be eligible for one time-to-repair credit. The SLA credit will apply to the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection.

(b) ISI Metro Ethernet Service Network Availability Credit.

The Service Level Commitment measurement will be based on a specific calendar month's performance. The credit will apply for each ISI Metro Ethernet Service Connection that does not meet the availability commitment. The SLA credit will apply to the monthly recurring charges for all the rate elements associated with the affected Metro



Ethernet Connection. (c) ISI Metro Ethernet Service Latency Credit. The Service Level Commitment measurement will be based on a specific calendar month's performance. The credit will apply for each ISI Metro Ethernet Service Connection that does not meet the latency commitment. The SLA credit will apply to the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection.

### **Service Level Agreement for Virtual ISI Metro Ethernet Service-**

Customer networks with Virtual ISI Metro Ethernet Service and Metro Ethernet Reporting are provided Service Level Agreements (SLAs) as summarized herein. ISI Metro Ethernet Service SLAs outlined herein specify the Company's repair and performance commitments for Metro Ethernet Reporting customers with Virtual Metro Ethernet Connections. SLAs will be applied on a per Class of Service (CoS) basis for Virtual Connections; traffic representing the different CoS (i.e., Best Effort, Business Critical, Real-Time and Interactive) transported across the same Virtual Connection will have different SLAs.

Details of the technical measurements and performance results methodologies for each commitment are provided herein.

In accordance with the conditions which follow, credits are available for missed commitments to customers purchasing Virtual ISI Metro Ethernet Service with the Metro Ethernet Reporting feature. Credits only apply for portions of service provided by the Company.

The following service measurements will outline the service levels the Company will deliver to Metro Ethernet Reporting customers with Virtual Metro Ethernet Connections:  
Repair Commitment:

- ISI Metro Ethernet Service Time-to-Repair Network Service Level Commitments:
- ISI Metro Ethernet Service Core Network Availability
- ISI Metro Ethernet Service Core Network Latency
- ISI Metro Ethernet Service Core Network Jitter
- ISI Metro Ethernet Service Core Network Packet Delivery

The Repair Commitment is measured on a per occurrence basis for each ISI Metro Ethernet Connection for all CoS. A Fault Report is produced thru the Metro Ethernet Reporting system that aids identification of potential outage durations upon which credits may be requested.

The Network Service Level Commitments are measured on the monthly performance of the Metro Ethernet core network during a specific calendar month by CoS. An SLA Report is produced thru the Metro Ethernet Reporting system that provides details of missed Network Service Level Commitments by CoS upon which credits may be requested based upon a specific calendar month's performance results.

The Company's performance measurement data for the Repair Commitment and Network Service Level Commitments will be collected and calculated utilizing the Company's internal processes as set forth herein. The Company's calculation of its performance shall be the sole determinate of the Company's obligation to provide a credit for a missed performance commitment.

**SLA Definitions –****ISI Metro Ethernet Service Time to Repair**

- ISI Metro Ethernet Service Time-To-Repair measures the outage duration on a customer's ISI Metro Ethernet Connection for all CoS. This measure will require the customer to report the problem to the ISI repair center.
- The repair interval will start with the time the trouble ticket is created and end when the fault is re-mediated. The Service Level Commitment measurement will be based on each individual trouble ticket for a customer's connection. Time for scheduled maintenance windows does not count towards SLA threshold.

**ISI Metro Ethernet Service Network Availability –**

ISI Metro Ethernet Service Network Availability measures the percentage of time by CoS during a calendar month that the customer's service is unavailable on the core network.

The core network is defined as being from the Ethernet switch serving the customer's A-end to the Ethernet switch serving the customer's B-end. Customer networks that do not span more than one switch in the core network are not eligible for the Network Availability SLA, and one will not be provided.

This Service Level Commitment will be calculated by CoS by measuring and summing the outage for each core network component used by the customer, divided by the total number of components, times the total service time for a particular calendar month.

Excluded from the outage time and service time are scheduled maintenance windows and time the network was unavailable due to circumstances outside the Company's control.

**ISI Metro Ethernet Service Network Latency –**

ISI Metro Ethernet Service Network Latency measures average one-way delay in milliseconds within the core network.

The core network is defined as being from the Ethernet switch serving the customer's A-end to the Ethernet switch serving the customer's B-end. Customer networks that do not span more than one switch in the core network are not eligible for the Network Latency SLA, and one will not be provided.

This Service Level Commitment will be calculated for each CoS (except the Best Effort CoS) by averaging the measured latency of simulated traffic for each eligible CoS within the Metro Ethernet Customer Network (i.e., between each pair of connections) during a calendar month.

**ISI Metro Ethernet Service Jitter –**

ISI Metro Ethernet Service Jitter measures the average variability, measured in time (milliseconds) between the actual packet transmission rate and the expected packet transmission rate within the core network for Interactive and Real-Time CoS.

The core network is defined as being from the Ethernet switch serving the customer's A-end to the Ethernet switch serving the customer's B-end.

This Service Level Commitment will be calculated for the Interactive CoS and Real-Time CoS by averaging the measured jitter of simulated traffic for each of the customer's



eligible CoS queue within the Metro Ethernet Customer Network (i.e., between each pair of connections) during a calendar month.

#### **ISI Metro Ethernet Service Packet Delivery –**

ISI Metro Ethernet Service Network Packet Delivery measures the percentage of packets conforming to the committed bandwidth profile that are delivered across the core network, without being dropped or lost as a result of a fault within the Virtual Ethernet network. The core network is defined as being from the Ethernet switch serving the customer's A-end to the Ethernet switch serving the customer's B-end.

This Service Level Commitment will be calculated for each CoS (except the Best Effort CoS) by averaging the measured packet delivery of simulated traffic for eligible CoS within the Metro Ethernet Customer Network (i.e., between each pair of connections) during a calendar month.

The Company's Service Level Commitments for Virtual ISI Metro Ethernet Service are as follows:

#### **Time-To-Repair**

- . Best Effort CoS: 4 hours or less
- . Business Critical CoS: 4 hours or less
- . Interactive CoS: 4 hours or less
- . Real-Time CoS: 4 hours or less

#### **Network Availability**

- . Best Effort CoS: 99.500% or greater
- . Business Critical CoS: 99.995% or greater
- . Interactive CoS: 99.995% or greater
- . Real-Time CoS: 99.995% or greater

#### **Latency (one-way)**

- . Best Effort CoS: Not Applicable
- . Business Critical CoS: 15 milliseconds or less
- . Interactive CoS: 5 milliseconds or less
- . Real-Time CoS: 5 milliseconds or less

#### **Jitter**

- . Best Effort CoS: Not Applicable
- . Business Critical CoS: Not Applicable
- . Interactive CoS: 1 millisecond or less
- . Real-Time CoS: 1 millisecond or less



### Packet Delivery

- . Best Effort CoS: Not Applicable
- . Business Critical CoS: 99.900% or greater
- . Interactive CoS: 99.950% or greater
- . Real-Time CoS: 99.995% or greater

### SLA Restrictions –

(a) The Company will implement SLA provisioning restrictions that will define customer network design requirements and limitations to ISI's commitment to meet Service Levels for ISI Metro Ethernet Service. The customer network design requirements are as follows:

- A customer must subscribe to the Metro Ethernet Virtual Service with Metro Ethernet Reporting to receive credits for missed Service Level Commitments.
- Credits are not provided for partial month service.
- A customer's account must be current to receive a credit.

(b) SLA Credits do not apply when any stated objective is not met because the Company does not have control over the circumstances causing the objective to be missed. Situations over which the Company does not have control include, but are not limited to, the following:

- any act, any omission or negligence on the part of the customer, any other customer or any third party, or of any other entity providing a portion of the service,
- labor difficulties, governmental orders, civil commotions, acts of civil or military authority, embargoes, epidemics, declared National Emergencies, criminal actions against the Company, war, terrorist acts, riots, insurrections, fires, explosions, nuclear accidents, power blackouts, acts of God (including, but not limited to, earthquakes, floods or unusually severe weather) or other circumstances beyond the Company's control,
- the customer's premises equipment, and
- unavailability of the customer's facilities and/or equipment including customer-provided power and environmental conditions for ISI-owned and operated equipment located on the customer's premises.

(c) The Customer must request a credit within one month of the Company missing a ISI Metro Ethernet Service Level Commitment. A customer request for a Network Service Level SLA credit must be submitted on a standard request form issued by the Company that includes the month the SLA commitment was missed, accurate identification of the affected circuit, and the observed measurement of the specific SLA that was missed. A customer request for a Repair SLA credit must be submitted on a standard request form issued by the Company that includes the month the SLA commitment was missed, accurate identification of the affected circuit, and the trouble ticket number of the repair request.

The Company will investigate customer requests for any SLA credits to determine the cause of any performance failures reported by the customer. The Company will investigate the customer's request over a period of up to 45 calendar days.



The 45-day period will begin when the customer makes the request for credit with their ISI Sales Representative.

SLA credits will be provided to the customer if the Company determines that the Company had control over the circumstances causing the failure.

**SLA Credits for Virtual Connections with Metro Ethernet Reporting –**

The following credits will apply when the Company misses a Service Level Commitment on any single CoS (each credit is described in (a) thru (e) following). A maximum of one credit will be applied monthly per Connection for an SLA not met for any CoS that is supported by the customer's CoS profile (i.e., a maximum of one credit is applicable for an SLA even if missed for multiple CoS).

ISI Metro Ethernet Service Time-To-Repair:

- 0 to 4 hours per incident: No Credit
- Over 4 hours to 24 hours per incident: A credit equal to 3/30 of the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection
- Each additional 24-hour period, per incident: Credit an additional amount equal to 3/30 of the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection

ISI Metro Ethernet Service Network Availability:

A credit equal to 3/30 of the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection

ISI Metro Ethernet Service Network Latency:

A credit equal to 3/30 of the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection

ISI Metro Ethernet Service Jitter:

A credit equal to 3/30 of the monthly recurring charges for all the rate elements associated with the affected MetroEthernet Connection

ISI Metro Ethernet Service Packet Delivery:

A credit equal to 3/30 of the monthly recurring charges for all the rate elements a  
The SLA credit amount will be determined by applying the credits outlined preceding to the rate elements or total billed revenues specified following.

The total credits issued for all SLAs for a specific ISI Metro Ethernet Service Connection during a single bill period may not exceed the total monthly recurring charges billed for all the rate elements associated with that ISI Metro Ethernet Service Connection. Credits are not provided for partial month service.

(a) ISI Metro Ethernet Service Time-To-Repair Credit. The Service Level Commitment measurement will be based on each individual trouble ticket for a customer's connection. Multiple trouble tickets on the same day for the same customer connection will only be eligible for one time-to-repair credit. The SLA credit will apply to the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection.



(b) ISI Metro Ethernet Service Network Availability Credit.

The Service Level Commitment measurement will be based on a specific calendar month's performance. The credit will apply for each ISI Metro Ethernet Service Connection that does not meet the availability commitment. The SLA credit will apply to the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection.

(c) ISI Metro Ethernet Service Latency Credit. The Service Level Commitment measurement will be based on a specific calendar month's performance. The credit will apply for each ISI Metro Ethernet Service Connection that does not meet the latency Commitment for any eligible CoS. The SLA credit will apply to the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection.

(d) ISI Metro Ethernet Service Jitter Credit. The Service Level Commitment measurement will be based on a specific calendar month's performance. The credit will apply for each ISI Metro Ethernet Service Connection that does not meet the jitter Commitment for any eligible CoS. The SLA credit will apply to the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection.

(e) ISI Metro Ethernet Service Packet Delivery Credit. The Service Level Commitment measurement will be based on a specific calendar month's performance. The credit will apply for each ISI Metro Ethernet Service Connection that does not meet the packet delivery commitment for any eligible CoS. The SLA credit will apply to the monthly recurring charges for all the rate elements associated with the affected Metro Ethernet Connection.