Attachment D-1

Network Service Level Agreements

SERVICE(S)	Mean Time To Repair (MTTR)
Metro Ethernet Service OPT-E-MAN • Bronze Grade of Service • Silver Grade of Service OPT-E-WAN • CoS/GoS 1 • CoS/GoS 2 • CoS/GoS 3 • CoS/GoS 4 DecaMAN GigaMAN ASE **MPLS Services** AT&T VPN (AVPN) Managed AVPN • Managed CSU Probe • Managed Router **Internet Services** Managed Internet Service (MIS)	**Definition** Mean Time to Restore (MTTR) objective shall be the average time required to restore service and resume availability in a one-month (720 hour) period. The time is measured from the moment the outage is reported until the service is available. The monitoring, capturing, testing, & troubleshooting facilities necessary to validate any trouble ticket claim will be maintained by the service provider and data provided to customer/ DIR where available upon request coincident with trouble ticket. **Measurement Process** The time is measured from the moment the outage is reported by the Customer until the service is available. If the Contractor fails to meet service parameters defined for each Grade of Service (for applicable services), a service credit will be offered to the Customer given certain conditions are met: AT&T will provide DIR a monthly SLA Non-Compliance Report as required that includes a listing of all outages with associated credits. **Objectives** • Core Network: 4 hours after a trouble ticket is opened • Local Loop: 4 hours after a trouble ticket is opened and 8 hours if a technician is required to be dispatched **Monthly Rights and Remedies** Customer will be entitled to a credit of 35% of the discounted monthly recurring charge for the covered Service Component. Maximum of 100% credit in any single billing period will apply. Services eligible to receive an out of service credit of 2 times the monthly recurring charge for the unavailable period for any outage over 36 hours include: • ISDN BRI • DSL • Local Voice Service ○ Business Lines

Private Line Services DS1 DS3 OC3 OC12 OC48 OC192 ATM Frame Relay ISDN BRI **DSL Services** DSL **BVoIP Services** Voice DNA (vDNA) IP Toll Free IPFlex **Local Voice Services** Business Lines Business Trunks PRI SmartTrunk	○ Business Trunk ○ PRI SmartTrunk

SERVICE(S)	Service Availability
Metro Ethernet Service OPT-E-MAN • Bronze Grade of Service • Silver Grade of Service OPT-E-WAN • CoS/GoS 1 • CoS/GoS 2 • CoS/GoS 3 • CoS/GoS 4 DecaMAN GigaMAN ASE **MPLS Services** AT&T VPN (AVPN) Managed AVPN • Managed CSU Probe • Managed Router **Internet Services** Managed Internet Service (MIS) **Private Line Services** DS1 DS3 OC3	**Definition** Calculated as the percentage of time that the network is capable of accepting and delivering customer data to the total time in the measurement period. The calculation for Network Availability for a given calendar month is as follows: **Measurement Process** Circuit availability of 99.95% per month. This equates to less than 21.6 minutes of downtime per month (based on a 30-day month), excluding periods attributable to Stop-Clock Conditions (including but not limited to maintenance window). Network/Service Availability = [24 hours x days in month x 60 minutes] – network outage time (measured in minutes) --- [24 hours x days in month x 60 minutes] If the Contractor fails to meet service parameters defined for each Grade of Service (for applicable services), a service credit will be offered on a per circuit basis to the Customer given certain conditions are met: • AT&T will provide DIR a monthly SLA Non-Compliance Report as required that includes a listing all outages with associated credits per circuit. **Objectives** 99.95% **Monthly Rights and Remedies Per Circuit** • 2 hours – 3 Hours = 5% of monthly rate • 3 hours – 4 Hours = 15% of monthly rate • 4 hours – 5 Hours = 20% of monthly rate • 5 hours – 6 Hours = 25% of monthly rate • 6 hours – 7 Hours = 30% of monthly rate • 7 hours – 8 Hours = 35% of monthly rate • 8 Hours – 16 Hours = 50% of monthly rate • > 16 Hours = 100% of monthly rate

OC12 OC48 OC192 ATM Frame Relay ISDN BRI **DSL Services** DSL **BVoIP Services** Voice DNA (vDNA) IP Toll Free IPFlex	

SERVICE(S)	Latency
Metro Ethernet Service OPT-E-MAN • Bronze Grade of Service • Silver Grade of Service OPT-E-WAN • CoS/GoS 1 • CoS/GoS 2 • CoS/GoS 3 • CoS/GoS 4 ASE **MPLS Services** AT&T VPN (AVPN) Managed AVPN • Managed CSU Probe • Managed Router **Internet Services**	**Definition** The amount of time necessary for a typical frame to traverse the network. Network Latency is a monthly measure of the AT&T network-wide delay within the United States, which is the average interval of time it takes during the applicable calendar month for test packets of data to travel between selected pairs of AT&T Network Nodes within the United States. Specifically, the time it takes test packets to travel from one AT&T Network Node in a pair to another and back is measured for selected pairs of AT&T Network Nodes in the Region over the month. Latency for the month is the average of these measurements. • AVPN (Transport): AT&T MPLS Port-to-MPLS Port • AVPN Managed CSU Probe: MPLS Site-to-MPLS Site. Applicable to both Site 1 and Site 2 if both sites are a qualified pair, meaning both sites connect to the same AVPN VPN. • AVPN Managed Router: MPLS Site-to-MPLS Site. Applicable to both Site 1 and Site 2 if both sites are a qualified pair, meaning both sites connect to the same AVPN VPN. • OPT-E-MAN: VPLS Site-to-VPLS Site. Based on measurement of the time it takes to travel from the origination port to the termination port for the connection in question.

Managed Internet Service (MIS) **<u>Private Line Services</u>** ATM Frame Relay	• ASE: Based on measurement of the time it takes data to travel from the origination port to the termination port for the connection in question. The monitoring, capturing, testing, & troubleshooting of facilities necessary to validate any trouble ticket claim will be maintained by the service provider and data provided to customer/ DIR where available upon request coincident with trouble ticket. **Measurement Process** If the Contractor fails to meet service parameters defined for each Grade of Service (for applicable services), a service credit will be offered to the Customer given certain conditions are met: • AT&T will provide DIR a monthly SLA Non-Compliance Report as required that includes a listing all outages with associated credits. • Packet Delivery Rate, Latency and Jitter calculations will be measured only when the associated networks are available. **Objectives** • OPT-E-MAN Bronze Grade of Service: 27ms one way • OPT-E-MAN Silver Grade of Service: 18ms one way • OPT-E-WAN: 19ms one way • AVPN Transport: 19ms one way • AVPN Managed CSU Probe: 60ms one way • AVPN Managed Router – CoS1: 52ms one way • AVPN Managed Router – CoS2 & 2V: 54ms one way • AVPN Managed Router – CoS3 & 5: 60ms one way • MIS: 19ms one way • ATM: 50ms one way • Frame Relay: 50ms one way • <u>ASE IntraLATA COS Based</u>: Real Time 5ms; Interactive 13ms; Bus. Critical-High 20ms; Bus. Critical-Medium 30ms; Non-Critical-High 37ms; Other COS types N/A • <u>ASE InterLATA COS Based</u>: Real Time 37ms; Interactive 37ms; Bus. Critical-High 37ms; Bus. Critical-Medium 37ms; Non-Critical-High 37ms; Other COS types N/A • <u>CoS1 (e.g., VoIP)</u>: engineered to support real-time traffic to include Voice over IP (VoIP) that **requires low latency due to the time sensitive nature of the application** (some kind of codec). **In addition to the low latency requirement, the traffic may have jitter requirement that calls for <u>careful engineering</u>** of the applications on the link.

	• CoS2V (e.g., Video): engineered to support lower latency traffic and is intended for support of video traffic, but it may be used for other types of traffic as well. COS2V has a dedicated bandwidth allocation together with a strict policer that discards excess traffic in the class. This combination is suitable for supporting the relatively well-behaved video traffic streams and **maintaining the low latency** that they require. **Monthly Rights and Remedies** If Customer reports that covered PVC's latency exceeds its performance objective, and AT&T fails to remedy such failure within 30 days, Customer will be entitled to a U.S. Packet Latency SLA credit. SLA credit, if applicable, is equal to the prorated discounted monthly charge for the affected covered PVC, from the date the problem was reported to AT&T to the date the problem is remedied.

SERVICE(S)	Packet Delivery Rate (PDR)/Data Delivery Rate (DDR)
Metro Ethernet Service OPT-E-MAN • Bronze Grade of Service • Silver Grade of Service OPT-E-WAN • CoS/GoS 1 • CoS/GoS 2 • CoS/GoS 3 • CoS/GoS 4 ASE **MPLS Services** AT&T VPN (AVPN) Managed AVPN • Managed CSU Probe • Managed Router	**Definition** A measurement of the actual amount of useful and non-redundant information that is transmitted or processed across the network. It is a function of bandwidth, error performance, congestion and other factors. PDR is expressed as the average Data Delivery percentage of frames/packets that successfully traverse the network for that month for all selected pairs calculated by dividing Data Received by Data Delivered and multiplying by 100. The monitoring, capturing, testing, & troubleshooting facilities necessary to validate any trouble ticket claim will be maintained by the service provider and data provided to customer/ DIR where available upon request coincident with trouble ticket. • AVPN (Transport): AT&T MPLS Port-to-MPLS Port • AVPN Managed CSU Probe: measured from the managed CSU probe at Site 1 to the managed CSU probe at Site 2 in the Qualifying Pair. Applicable to both Site 1 and Site 2 if both sites are a qualified pair, meaning both sites connect to the same AVPN VPN. • AVPN Managed Router: measured from the managed router at Site 1 to the managed router at Site 2 in the Qualifying Pair for each class of service. Applicable if both sites are a qualified pair, meaning both sites connect to the same AVPN VPN). • OPT-E-MAN: VPLS Site-to-VPLS Site. Based on measurement of the time it takes to travel from the

Internet Services Managed Internet Service (MIS) **Private Line Services** ATM Frame Relay	origination port to the termination port for the connection in question. • ASE: Based on measurement of the time it takes to travel from the origination port to the termination port for the connection in question. **Measurement Process** PDR is calculated as the total number of effective frames/packets, per port, that successfully traverse the network within a calendar month calculated by dividing Data Received by Data Delivered and multiplying by 100. If the Contractor fails to meet service parameters defined for each Grade of Service, a service credit will be offered to the Customer given certain conditions are met: • AT&T will provide DIR a monthly SLA Non-Compliance Report as required that includes a listing all outages with associated credits. • Packet Delivery Rate, Latency and Jitter calculations will be measured only when the associated networks are available. **Objectives** • OPT-E-MAN Bronze Grade of Service: 99.50% • OPT-E-MAN Silver Grade of Service: 99.90% • OPT-E-WAN CoS1: 99.95% • OPT-E-WAN CoS2: 99.95% • OPT-E-WAN CoS3: 99.95% • OPT-E-WAN CoS4: 99.70% • AVPN Transport: 99.95% • AVPN Managed CSU Probe: 99.80% • AVPN Managed Router – CoS1: 99.90% • AVPN Managed Router – CoS2: 99.90% • AVPN Managed Router – CoS2v: 99.90% • AVPN Managed Router – CoS3: 99.80% • AVPN Managed Router – CoS4: SLA does not apply to CoS4 • AVPN Managed Router – CoS5: 99.80% (CoS5 requires minimum of 5% bandwidth) • MIS: 99.95% • Frame Relay: 99.99% • ATM: 99.99% (VBR-CBR) • ATM: 99.97% (VBR-RT) • ATM: 99.95% (VBR-NRT) • ASE IntraLATA COS Based: Real Time 99.995%; Interactive 99.95%; Bus. Critical-High 99.9%; Bus. Critical-Medium 99.9%; Non-Critical-High 99.5%; Other COS types N/A

	• ASE InterLATA COS Based: Real Time 99.95%; Interactive 99.95%; Bus. Critical-High 99.9%; Bus. Critical-Medium 99.9%; Non-Critical-High 99.5%; Other COS types N/A **Monthly Rights and Remedies** If after 30 days, the service performance for that parameter is still less than the committed level, the customer will be provided a service credit equal to the monthly charge for all affected ports for the month in which the service parameters fall below (or above) the committed level.

SERVICE(S)	Jitter
Metro Ethernet Service OPT-E-MAN • Bronze Grade of Service • Silver Grade of Service OPT-E-WAN • CoS/GoS 1 • CoS/GoS 2 • CoS/GoS 3 • CoS/GoS 4 ASE **MPLS Services** AT&T VPN (AVPN) Managed AVPN • Managed CSU Probe • Managed Router **Internet Services** Managed Internet Service (MIS)	**Definition** A monthly measure of the AT&T Network-wide delay variation of the packets transported across the network, which is the average delay variance in the interval of time it takes during the applicable calendar month for selected pairs of test packets of data in data streams to travel between pairs of AT&T Network Nodes in the United States. The monitoring, capturing, testing, & troubleshooting facilities necessary to validate any trouble ticket claim will be maintained by the service provider and data provided to customer/ DIR where available upon request coincident with trouble ticket. **Measurement Process** Jitter metric is based on the AT&T Core Network average and is determined on a subset of in-service locations. Grade of Service SLAs are provided for OPT-E-MAN and OPT-E-WAN Service. If the Contractor fails to meet service parameters defined for each Grade of Service, a service credit will be offered to the Customer given certain conditions are met: • AT&T will provide DIR a monthly SLA Non-Compliance Report as required that includes a listing all outages with associated credits. • Packet Delivery Rate, Latency and Jitter calculations will be measured only when the associated networks are available. **Objectives** • OPT-E-MAN Bronze Grade of Service: N/A • OPT-E-MAN Silver Grade of Service: 12ms • OPT-E-WAN CoS1: 1ms

	• OPT-E-WAN CoS2: N/A • OPT-E-WAN CoS3: N/A • OPT-E-WAN CoS4: N/A • AVPN Transport: 1ms • AVPN Managed CSU Probe: N/A • AVPN Managed Router – CoS1: N/A • AVPN Managed Router – CoS2 & 2V: N/A • AVPN Managed Router – CoS3 & 5: N/A • MIS: 1ms • ASE IntraLATA COS Based: Real Time 3ms; Interactive 10m; Other COS types N/A • ASE InterLATA COS Based: Real Time 3ms; Interactive 10ms; Other COS types N/A **Monthly Rights and Remedies** If after 30 days, the service performance for that parameter is still less than the committed level, the customer will be provided a service credit equal to 25% of the monthly recurring charge for all affected ports for the month in which the service parameters fall below (or above) the committed level.

SERVICE(S)	Chronic Outage
Metro Ethernet Service OPT-E-MAN • Bronze Grade of Service • Silver Grade of Service OPT-E-WAN • CoS/GoS 1 • CoS/GoS 2 • CoS/GoS 3 • CoS/GoS 4 DecaMAN GigaMAN ASE	**Definition** A Chronic Trouble (Chronic) is defined as a subscribed circuit/network component which has experienced 3 separate trouble tickets opened against it, by customer/DIR or Service Provider, for the same/similar symptom(s) or problem(s) over a rolling 30-day period. A Chronic's rolling 30-day counter is considered "reset" upon a period of 30 days free of same/similar trouble. Each trouble ticket is eligible for a separate credit consideration. The monitoring, capturing, testing, and troubleshooting facilities necessary to validate any trouble ticket claim will be maintained by the service provider and data provided to customer/DIR where available upon request coincident with trouble ticket. **Measurement Process** This Chronic SLA begins the first day of the circuit/network component's eligible billing. **Objectives** Customer Service Commitment and Financial Remedies for Non-Performance

MPLS Services AT&T VPN (AVPN) Managed AVPN • Managed CSU Probe • Managed Router **Internet Services** Managed Internet Service (MIS) **Private Line Services** DS1 DS3 OC3 OC12 OC48 OC192 ATM Frame Relay ISDN BRI **DSL Services** DSL **BVoIP Services** Voice DNA (vDNA) IP Toll Free IPFlex **Local Voice Services** Business Lines Business Trunks PRI SmartTrunk	**Monthly Rights and Remedies** If AT&T does not meet this performance objective, Customer will be entitled to a credit of one month's discounted monthly recurring charge for the covered service. If a circuit is categorized as chronic within the 30-day nominal service period defined above, DIR or its Customer may terminate the service(s) without penalty. Customer may provide notice to AT&T of its intent to terminate without penalty due to chronic service issue. A customer may exercise their right to receive credit or terminate service for each chronic instance independently.

SERVICE(S)	Class of Service (CoS) Descriptions
AT&T VPN (AVPN) • CoS1 • CoS2 • CoS2V • CoS3 • CoS4 • CoS5 **OPT-E-WAN (OEW)** • CoS1 • CoS2 • CoS3 • CoS4 **ASE** • Real-Time • Interactive • Business Critical-High • Business Critical-Medium • Non-Critical- High	**Service/Description** **AVPN** • CoS1 (e.g., VoIP): engineered to support real-time traffic to include Voice over IP (VoIP) that **requires low latency due to the time sensitive nature of the application** (some kind of codec). **In addition to the low latency requirement, the traffic may have jitter requirement that calls for careful engineering** of the applications on the link. • CoS2V (e.g., Video): engineered to support lower latency traffic and is intended for support of video traffic, but it may be used for other types of traffic as well. COS2V has a dedicated bandwidth allocation together with a strict policer that discards excess traffic in the class. This combination is suitable for supporting the relatively well-behaved video traffic streams and **maintaining the low latency** that they require. • CoS2 (e.g., Strategic/High-End Data Applications): serves data traffic that needs network resources allocated to it to insure timely performance. The applications can be client-server applications or transactions where response time is at a premium. • CoS3 (e.g., Business Data Applications): behaves similar to COS2 but has different profiles assigned from a queuing perspective. • CoS4 (e.g., Business Data Applications): the default class for applications that have not been specifically identified as requiring the priority or delay characteristics provided by previous CoS settings. For majority of customers, this class will handle the bulk of the traffic. • CoS5 (e.g., Scavenger/Internet Browsing/FTP): this class is only serviced when the other classes are inactive. This class is intended for applications that are permitted on the network but are not time critical and which should not be utilizing network resources when other more important business applications are active. **OEW** • CoS1 (e.g., VoIP/Video): engineered to support real-time traffic to include Voice over IP (VoIP) or video that **requires low latency due to the time sensitive nature of the**

	application (some kind of codec). In addition to the low latency requirement, the traffic may have jitter requirement that calls for careful engineering of the applications on the link. **This class is intended for support of voice and video traffic**, but it may be used for other types of traffic as well. • CoS2 (e.g., Strategic/High-End Data Applications): serves data traffic that needs network resources allocated to it to insure timely performance. The applications can be client-server applications or transactions where response time is at a premium. • CoS3 (e.g., Business Data Applications): behaves similar to COS2 but has different profiles assigned from a queuing perspective. • CoS4 (e.g., Scavenger/Internet Browsing/FTP): the default class for applications that have not been specifically identified as requiring the priority or delay characteristics provided by previous CoS settings. For majority of customers, this class will handle the bulk of the traffic. This class is only serviced when the other classes are inactive. This class is intended for applications that are permitted on the network but are not time critical and which should not be utilizing network resources when other more important business applications are active. **ASE** • **Real-Time:** Supports applications that require minimal loss, are latency-sensitive and require low latency variation (jitter), including voice and video. The service parameters associated with Real-Time CoS are Packet Delivery Rate (PDR), Latency, Jitter, and Network Availability. • **Interactive:** Supports high-priority business data applications or jitter-sensitive applications such as voice and video. The service parameters associated with Interactive CoS are PDR, Latency, Jitter, and Network Availability. • **Business Critical-High:** Supports most business data applications with moderate tolerance for delay and which are more sensitive to jitter, and have a higher priority than Business Critical-Medium. The service parameters associated with Business Critical-High CoS are PDR, Latency, and Network Availability.

	ASE (Continued) • **Business Critical-Medium:** Supports most business data applications with moderate tolerance for delay and which are less sensitive to jitter. The service parameters associated with Business Critical-Medium CoS are PDR, Latency, and Network Availability. • **Non-Critical High:** Supports low priority business applications with more tolerance for delay and availability. The service parameters associated with Non-Critical High CoS are PDR, Latency, and Network Availability.

SERVICE(S)	Service Interruption
AT&T Dedicated Ethernet (ADE)	**Definition** **Service Interruption** The service becomes unusable to the Customer due to a failure of a facility component used to furnish service or in the event that the protective controls applied by AT&T result in the complete loss of service by the Customer for reasons not attributable to the customer. **Measurement Process** A service interruption period starts when a service disruption of ten (10) consecutive seconds or more is reported to AT&T and confirmed by AT&T that continuity of ADE service has been lost. The interruption period ends when the ADE service is operative. **Objective** Unprotected ADE circuits - no performance objective is available. **Monthly Rights and Remedies** AT&T Dedicated Ethernet provides credits in the event of a service interruption of 10 consecutive seconds or greater and determined by AT&T to be in its network. The credit allowance shall not exceed 100% of the applicable monthly rates for the affected circuit(s).

	Credit Allowance for Service Interruptions (for Unprotected AT&T Dedicated Ethernet circuit Arrangements) Credit will be provided for an interruption of 10 seconds or more at the rate of 10/8640 of the monthly charges for the affected AT&T Dedicated Ethernet circuit for each period of 5 minutes or major fraction thereof that the interruption continues.

SERVICE(S)	Service Interruption (continued)
Metro Ethernet Service **AT&T Switched Ethernet (ASE)**	**Monthly Rights and Remedies (continued)** **Credit Allowance for Service Interruptions (ASE)** The credit allowance for an interruption or for a series of interruptions shall be calculated based on the applicable monthly rate for the port (or ports) which were interrupted, including the other rate elements associated with that port (CIR, repeater, etc.). The credit amount applicable in a given month shall not exceed 100% of the monthly recurring charge for the port and associated rate elements. No credit shall be applicable to other ports on the network that were uninterrupted, even if they were unable to connect to an interrupted port. No credit shall be allowed for an interruption period of less than 30 minutes.

SERVICE(S)	Time to Mitigate
AT&T Distributed Denial of Service (DDoS) To be ordered only with AT&T Dedicated Internet (ADI) formerly referred to as Managed Internet Service (MIS)	**Definition(s)** **Pre-Authorized Mitigation** AT&T identifies a volumetric attack and provides an Alert to the AT&T Security Network Operations Center (S/NOC) and the Customer. Mitigation begins prior to Customer notification. (Applies to AT&T DDoS Defense Hourly Rate Plans and AT&T Bandwidth Based Proactive Offer to GovEd.) **Manual Mitigation** AT&T identifies a volumetric attack and provides an Alert to the AT&T Security Network Operations Center (S/NOC); the S/NOC consults with the customer prior to mitigation. Alternatively, Customer may identify an attack and notify S/NOC of request for mitigation. (Applies to AT&T DDoS Defense Hourly Rate Plans and AT&T Bandwidth Based Proactive Offer to GovEd.) **Platform Initiated Mitigation** Detection and automatic initiation of DDoS mitigation occurs for active DDoS attacks when pre-defined traffic thresholds are exceeded. (Applies only to AT&T DDoS Defense Hourly Rate Plans of 215 hours or higher.) **Measurement Process** Alert generation will be determined by using the log or report information from the Attack Mitigation Equipment, or a trouble ticket or event logged with the S/NOC. Customer request to the S/NOC to initiate mitigation will be determined based on the creation of a trouble ticket with the S/NOC. The beginning of mitigation will be determined through use of the log or report information from the Attack Mitigation Equipment. **Objectives** Pre-Authorized Mitigation – Begins within 30 minutes of a validated DDoS attack after receiving the Alert. Manual Mitigation – Begins within 30 minutes of Customer informing the S/NOC of a request to initiate mitigation. Platform-Initiated Mitigation – Begins within 5 minutes of the relevant Alert.

SERVICE(S)	Time to Mitigate (continued)
AT&T Distributed Denial of Service (DDoS) To be ordered only with AT&T Dedicated Internet (ADI) or Managed Internet Service (MIS)	**Monthly Rights and Remedies** Pre-Authorized Mitigation and Manual Mitigation Time to Mitigate (minutes) / % of Monthly Charge credit 31 - 60 / 25% 61 - 120 / 50% 121+ / 100% Platform-Initiated Mitigation Time to Mitigate (minutes) / % of Monthly Charge credit 6 - 30 / 25% 31 - 60 / 50% 61+ / 100% Platform-initiated credits to be granted only in situations where the System did not trigger mitigation even though thresholds were properly set. Mitigation that did not trigger due to incorrectly defined customer requirements or thresholds unknown to AT&T will not qualify for credits. Credits will not exceed 100% of the billed monthly contractual charge. **Written credit request must be submitted by customer to threat@att.com and to AT&T account team within 30 days of initiation of mitigation. Additionally customer shall include any Trouble Ticket number(s) associated with the credit request.**

SERVICE(S)	Service Availability
AT&T FLEXWARE	**Definition(s)** Measures the average availability of VNFs on a given Host, and is measured and reported as a percentage of a full calendar month. Host – a physical server or similar computing platform that is connected to a network and runs software that enables the instantiation and operation of one or more VNFs. (New Hosts must be tested and accepted by AT&T. The AT&T Equipment must have a means of dedicated out-of-band access for remote management.) Virtual Network Function (VNF) – an individual instance of a network function, such as routing, that has been virtualized in software and operates as a Service Component on a given Host. **Measurement Process** Begins at the start of the next full calendar month following the Service Activation Date. % Availability = [(TVM – TFM) / TVM] x 100 TVM – Total VNF minutes per month per applicable Host (total minutes in a month multiplied by the number of eligible VNFs.) TFM – Total failed minutes per applicable Host, where an Eligible VNF was unavailable due to a Critical Outage. Does not include deferred maintenance time or time attributed to scheduled maintenance. **Objective** The performance objective for availability is 99.9% in a full calendar month. **Monthly Rights and Remedies** 5% of the monthly recurring charge for the affected Host and associated VNFs.

SERVICE(S)	Service Availability (continued)
AT&T Cloud Web Security	**Definition(s)** General Availability of the service means that requests for web pages are completed and web pages are returned regardless of latency; but does not include the unavailability of specific web pages. Configuration Portal Availability simply means that the portal is available for log-on. **Measurement Process** Calculated per full calendar month as follows: [(Total – NE – EO) / (Total – EO)] x 100 Total = Total minutes in calendar month NE = Non-excluded or unplanned downtime (minutes) EO = excused outages (minutes); scheduled and emergency maintenance. **Objective** Service Availability – 99.999% Configuration Portal Availability – 99.9% **Monthly Rights and Remedies** None

SERVICE(S)	Service Availability/Chronic Failure
AT&T Cloud Web Security	**Definition(s)** Outage – measured in minutes and is the time that a Service or Service Component is unavailable on an unscheduled basis. (Does not include scheduled periods for such activities as maintenance, repair, or upgrade.) Chronic Failure – An outage attributable solely to AT&T and not the Customer for more than 36 hours in any calendar quarter. **Measurement Process** Unavailability of Service validated by AT&T to be solely attributable to AT&T for a period > 36 hours in a calendar quarter. **Objective** No Chronic Failures **Rights and Remedies** Customer may terminate the Service upon thirty (30) days written notice to AT&T. AT&T shall refund to Customer a pro-rata portion of the Service fees paid in advance and not yet used within forty-five (45) days from termination.

SERVICE(S)	On-Time Provisioning
AT&T Emergency Service IP Network™ (AT&T ESInet™)	**Definition(s)** ***Service Activation Committed Date*** is the mutually agreed upon date that a new, moved, or changed service, and or service component will be made available to the customer. ***Service Activation Date*** is the date, upon customer approval of User Acceptance Testing, that AT&T provides notice that the Service is available for use by the PSAP or Host location. **Objective** Service to be made available to Customer no later than Service Activation Committed Date unless changed by mutual agreement between the customer and AT&T, at which time a new Service Activation Committed Date will be established. **Measurement Process** Service activated on or before Service Activation Committed Date results in accomplishment of On-Time Provisioning objective. **Rights and Remedies** If AT&T does not meet the performance objective for the On-Time provisioning SLA objective, Customer may be eligible for, subject to SLA Exclusions, a one-time SLA credit equal to one (1) month's discounted MRC for call routing service for the applicable service site, after the Service Activation is completed. Notes: • The Service Activation Date will be mutually agreed to by the customer and AT&T during the development of the Project Plan. • GIS services are not subject to the On-Time Provisioning SLA.

SERVICE(S)	Time to Restore
AT&T Emergency Service IP Network™ (AT&T ESInet™)	**Definition(s)** ***Outage*** is defined as an occurrence within the AT&T ESInet Service (including managed NTE and/or AT&T-provided access) that results in the inability of Customer to receive or transfer ESInet calls for more than one minute. (Does not include AT&T maintenance time.) ***Time to Restore*** is the amount of time between issuance of a trouble ticket and resolution of issue. **Objective** Service Site Availability – 100% **Measurement Process** Time to Restore is measured from when a trouble ticket is opened by AT&T Customer Care and Customer releases the affected Service Component(s) to AT&T (in cases where it is necessary for AT&T to diagnose and/or restore a Service Component into use) until the time AT&T Customer Care makes its first attempt to notify Customer that the Service Components are restored and available for Customer to use. **Rights and Remedies** Upon certification of non-compliance of service objective, Customer may be eligible for an SLA credit equal to the Customer's total discounted MRC for call routing services at the affected PSAP sites multiplied by a percentage based on the duration of (Time to Restore) the Outage, as set forth in the Time to Restore SLA Credit Table below. **Time to Restore SLA Credit Table** **Time to Restore – Equal to or Greater Than** / **Time to Restore – Less Than** / **Credit Percentage** **1 minute** / **2 hours** / **5%** **2 hours** / **4 hours** / **10%** **4 hours** / **8 hours** / **15%** **8 hours** / **16 hours** / **20%** **16 hours** / **>16 hours** / **40%**

SERVICE(S)	ESInet Service Availability
AT&T Emergency Service IP Network™ (AT&T ESInet™)	**Definition** The Service will support a Service availability SLA that measures the availability requirement of 99.999% for Call Processing ("Service Availability"). Call Processing is the ability of the Service to deliver calls from the inbound Service demarcation point into the Core Call Processing Nodes and from the Core Call Processing Nodes to a valid PSAP destination. **Measurement Process** The Service Availability target of 99.999% per month means service downtime will not exceed 26.3 seconds per month (based on a 30-day month), excluding periods attributable to Stop-Clock Conditions (including but not limited to maintenance windows). Service Availability is calculated per full calendar month as follows: A = (Total – OT) / Total Whereas: A = Availability Total = Total seconds in calendar month OT = Outage time per month measured in seconds Notes: • AT&T will provide DIR a monthly SLA Non-Compliance Report as required that includes a listing all outages, by PSAP customer, with associated credits. **Objectives** 99.999% **Monthly Rights and Remedies** If the Service Availability falls below the target objective of 99.999% in a calendar month then a Service Availability SLA credit of 5% of the monthly recurring charge for the ESInet call routing services shall apply.

SERVICE(S)	PSAP Call Delivery
AT&T Emergency Service IP Network™ (AT&T ESInet™)	**Definition(s)** ***PSAP Call Delivery*** is the delivery of calls that are received into the Service in any given calendar month to a valid destination. ***Valid Destination*** means the correct primary or alternate PSAP, PSTN, or tone/treatment designated by the customer. **Objective** SLA is not met in a calendar month if AT&T fails to deliver to a Valid Destination: • one (1) or more call(s) if fewer than 100,000 calls presented in a calendar month, or • more than .001% of total calls if 100,000 or more calls are presented in a calendar month **Measurement Process** PSAP receives 9-1-1 call(s) not belonging to a Valid Destination service area and opens AT&T trouble ticket for further investigation by AT&T 911 Resolution Center. **Rights and Remedies** If AT&T does not meet this performance objective and fails to remedy the issues within one (1) month following the month AT&T did not meet its performance objective, then Customer may be entitled to, subject to SLA Exclusions, a one-time SLA credit equal to 5% of the discounted MRCs for call routing services for the impacted PSAP.

SERVICE(S)	Voice Quality
AT&T Emergency Service IP Network™ (AT&T ESInet™)	**Definition(s)** ***Voice Quality*** is a relative term that depends upon the receiver's perception; fidelity of sound, recognition of speech or speaker; may be measured by Mean Opinion Score. ***Mean Opinion Score (MOS)*** – in voice communications, particularly Internet telephony, the MOS provides a numerical measure of the quality of human speech at the destination end of the circuit. The scheme uses subjective tests (opinionated scores) that are mathematically averaged to obtain a quantitative indicator of the system performance. **Objective** Daily Predicted MOS (PMOS) value per PSAP to be 3.5 or more for G.711 codec as measured by AT&T, where the ideal PMOS score for the G.711 Codec is 4.3. **Measurement Process** IP audio packets from Aggregation sites (from the AT&T ESInet demarcation point) into the Core Call Processing Nodes and from the PSAP (from the Customer demarcation point) into the Core Call Processing Nodes. Daily PSAP PMOS value will be based on an average of the per call PMOS scores over a 24-hour calendar day. **Rights and Remedies** If AT&T does not meet this performance objective and the Voice Quality SLA falls below the performance objective for three consecutive days in a given calendar month and AT&T is unable to restore Service to meet the performance objective within 30 days of the failure, then Customer may be entitled to, subject to SLA Exclusions, a one-time credit equal to 5% of the discounted MRCs for call routing services for the impacted PSAP(s).

SERVICE(S)	SLA Claims & Limitations
AT&T Emergency Service IP Network™ (AT&T ESInet™)	**Customer must follow the below instructions for claim submission:** a) Open a trouble ticket within 2 weeks of the day that AT&T failed to meet the ESInet SLA performance objective; or that Customer otherwise became eligible for the SLA service credit. b) notify AT&T in writing of a claim within 30 days of the SLA performance objective failure via the AT&T BusinessDirect® portal (https://www.businessdirect.att.com). c) In the claim request include the trouble ticket number or provisioning order number and the date and time of associated event. **SLA Limitations** Any SLA credit paid to customer shall constitute the sole and exclusive remedy available to Customer for failure by AT&T to meet a performance objective. Customer may only receive Service credits equal to one (1) month Covered Charge (discounted/billed charge) for any affected PSAP in a given calendar month.

SERVICE(S)	SLA Exclusions

AT&T Emergency Service IP Network™ (AT&T ESInet™)	**SLA Exclusions**
	SLAs do not apply if Customer and AT&T agree to another remedy for the same interruption, deficiency, degradation, or delay affecting the Service Component subject to the SLA.
	
	In addition to the general SLA exclusions detailed in the AT&T SLA D1 report for the State of Texas, AT&T is not responsible for failure to meet an ESInet SLA resulting from the following:
	
	• Negligent conduct or misuse of the Service by Customer;
	• The failure or deficient performance of power, equipment, services or systems not provided/maintained by AT&T;
	• The conduct or performance of a third-party service provider providing service to Customer;
	• A PSAP/Host location that has not been actively in-use (e.g., calls made to or from the PSAP/Host location) for a minimum of 30 calendar days; provided, however, such exclusion does not apply to the On-Time provisioning SLA.
	• Customer requested or caused delays or Customer's election to not release a Service Component for testing and/or repair;
	• Service interruptions, deficiencies, degradations, or delays:
	  ○ Due to network or LAN components not provided by AT&T
	  ○ Due to ESInet network connections or local access where complete physical and POP diversity to the PSAP or Host location is not provided.
	  ○ Due to access lines or Customer Premise Equipment (CPE), whether provided by AT&T or others (except as specifically provided in a particular SLA), including CPE trunk volume.
	  ○ Due to actions taken by Customer resulting in call quality issues (e.g., CPE trunk volume power too high/low, customer equipment).

SERVICE(S)	SLA Exclusions (continued)
AT&T Emergency Service IP Network™ (AT&T ESInet™)	○ Due to failure of PSAP call handling equipment and software ○ Due to the time period when AT&T or its agents were not afforded access to the premises where access lines associated with the AT&T transport service are terminated or AT&T CPE is located; ○ During maintenance of a service component or for the implementation of a customer order ○ Due to insufficient bandwidth/concurrent call capacity ordered by Customer ○ Due to faults or failures by Originating Service Providers ○ Due to testing and/or repair related to the use of a Service Component by Customer ○ Due to failed test calls of less than 10 (ten) seconds ○ When a PSAP receives less than 20 calls per day for purposes of the Voice Quality SLA For all SLA claims, if the same occurrence causes AT&T to fail to meet more than one SLA applicable to a Customer Site, Customer is eligible to receive a credit under only one SLA. Additionally, Customer may receive: • Credits for an affected Customer Site in a given month equal to the total discounted monthly Covered Charge for the Site in a given calendar month. Use of Alternate Service: If Customer elects to use another means of communications during the period of interruption, Customer is solely responsible for the alternate communication service, including any associated charges.

SLA Exclusions/General Stop Clock Conditions Reference

SLA Exclusion and/or Stop Clock criteria include the following items:

1. Periods when a restoration or testing effort is delayed at the specific request of the End-User*****. The Stop Clock condition shall exist during the period the Contractor was delayed, provided that reasonable and documented efforts are made to contact the End-User during the applicable Stop Clock period. Includes customer election not to release a service component for testing or repair.
2. Time after a circuit has been restored, but End-User requests ticket be kept open for observation. If the circuit is later determined by the End-User to not have been restored, the Stop Clock shall continue until the time the End-User notifies the Contractor that the circuit has not been restored.
3. Time after circuit has been restored, but End-User is not available to verify the circuit is working. If circuit is later determined by End-User to not have been restored, the Stop Clock shall apply only for time period between Contractor's reasonable attempt to notify the End-User that Contractor believes the circuit has been restored and the time the End-User notifies the Contractor that the circuit has not been restored.
4. Restoration cannot be achieved because problem has been isolated to wiring that is not maintained by Contractor, or any of its subsidiaries, subcontractors, or Affiliates.
5. Trouble caused by a power problem outside of the responsibility of the Contractor.
6. Trouble caused by services or systems not provided by AT&T.
7. Lack of building entrance Facilities or conduit structure that are the End-User's responsibility to provide.
8. The following contact/access problems, provided that Contractor makes reasonable efforts to contact End-User during the applicable stop clock period:
    a. Access necessary to correct the problem is not available because access has not been arranged by site contact or End-User representative.
    b. Site contact refuses access to technician who displays proper identification.
    c. Insufficient or incorrect site contact information which prevents access, provided that Contractor takes reasonable steps to notify End-User of the improper contact info & takes reasonable steps to obtain correct information.
    d. Site has limited hours of business that directly impacts the Contractor's ability to resolve the problem.
    e. If it is determined later that the cause of the problem was not at the site in question, then the Stop Clock shall not apply.
9. Any problem or delay to the extent caused by End-User's staff that prevents or delays Contractor's resolution of the problem. In such event, Contractor shall make a reasonable request to End-User staff to correct the problem or delay.
10. End-User applications that interfere with repair of the trouble.
11. Service interruptions or delays during any period in the which AT&T are not afforded access to the premises where the services are terminated.
12. Repair/replacement of CPE not provided by Contractor if the problem has reasonably been isolated to the CPE.
13. Failure of the trouble ticket originator or responsible End-User to return a call from Contractor's technician for on-line close-out of trouble tickets after the circuit has been restored as long as Contractor can provide Documentation substantiating message from Contractor's technician.
14. An outage directly related to any properly performed scheduled maintenance or upgrade. Any such stop clock condition shall not extend beyond the scheduled period of the maintenance or upgrade. SLAs will apply for any maintenance caused outage beyond the scheduled maintenance period. Outages occurring during a scheduled maintenance

or upgrade period and not caused by the scheduled maintenance shall not be subject to this paragraph 12 stop clock criteria.

15. Any problem or delay caused by a third party not under the control of Contractor, not reasonably preventable by Contractor, including, cable cuts not caused by the Contractor. Contractor's Affiliates, subsidiaries, or subcontractors shall be deemed to be under the control of Contractor with respect to the Equipment, services, or Facilities to be provided under this Contract.
16. Service interruptions, deficiencies, degradations or delays due to access lines or CPE not provided by AT&T.
17. Force Majeure events, as defined in the terms and conditions of the Contract such as, but not limited to, an earthquake, hurricane, flood, fire, storms, tornadoes, explosion, lightning, power surges or failure, fiber cuts (limited to the local loop or last mile), strikes or labor disputes.
18. Credits for any customer service in a given month totaling no more than the total covered monthly charges.
19. Customer may not receive credits for more than one of the SLAs on a single event or incident.
20. AT&T is not responsible for failure to meet an SLA resulting from DSO level of services.
21. Any services provisioned outside of the State of Texas are subject to standard product SLAs as defined in the respective Product Service Guide(s).
22. The parties agree that Service Level Credits shall not be applicable if one or more of the following conditions are identified by Supplier and Supplier's failure to achieve the Service Levels, in respect of which those Service Credits would otherwise be due and payable, is a consequence of any of the following:
    a. Service Level measurements shall be removed from the achievement calculation for latency (Round Trip Delay), jitter and packet delivery if either access link defined within the specific pair exceeds the mutually agreed upon design standard (for example greater than 70% utilization) for a sustained period of 10 minutes or more.
    b. The material disruption to the provision of the Services (or any part thereof) as a consequence of penetration testing and vulnerability scanning being undertaken by Customer or a Customer Authorized User.
    c. If Supplier recommends to Customer that a specific Site requires a different configuration (including Equipment) in order to maintain or achieve the agreed Service Levels, and Customer does not agree to make such Change or agree to make such Change in a timely manner, then the Service Levels will no longer apply to that Site.

*** Note: in this section, the term "End-User" includes End-Users and Customers, whichever is applicable.**

23. SLAs do not apply during service failures or interruptions, deficiencies, degradations, or delays:
    - Due to negligent conduct or misuse of Service by Customer.
    - Due to conduct of a third-party service provider providing service to Customer.
    - Due to Customer Equipment used with the Service that has not been upgraded by Customer as required by AT&T.
    - Due to failure of code or software managed and/or written by Customer or a third-party for the Customer.
    - During any period in which AT&T does not have Out-of-Band access to AT&T equipment
    - During any period in which AT&T or its agents are not afforded access to AT&T equipment
    - During any period in which the Customer prevents AT&T or its agents from implementing software patches or upgrades necessary for AT&T to provide the Service
    - During any application failures caused by Customer that are disrupting or adversely impacting their Service; or failing to respond to alerts as agreed or creating false alerts.
    - During any maintenance windows or any other period when Customer has released a Service to AT&T for maintenance or rearrangement purposes or for the implementation of a Customer order.
    - During any period in which a Customer is unavailable to accept repairs or requests a delay in repairs.
    - FlexWare - New Hosts must be accepted and tested by AT&T.
    - FlexWare - Customer must provide AT&T with at least one week prior written notice of any Customer initiated network changes that could affect the Service. All changes must follow the agreed-upon change management process.

24. Additional DDoS SLA exceptions
    - If Time to Mitigate cannot be verified with AT&T's standard diagnostic procedures, then SLAs do not apply.
    - If offending traffic cannot be routed to the AT&T access link with customer; or if Customer traffic (or any portion thereof) is not routed through AT&T, then an SLA will not apply.
    - Any service failure or interruption caused by a third party (including AT&T subcontractors, Suppliers and local service provider) not recognizing or delivering upon an AT&T request to reroute a customer's traffic to AT&T's designated facilities for the purpose of scrubbing the traffic.