SERVICE LEVEL AGREEMENT (SLA) MANAGEMENT PLAN

Contents

Voice Services SLAs

Verizon's Voice Services include the following SLAs:

- VoIP/SIP
- IP Toll Free (IP Contact Center)
- DDoS Shield (available with IP Contact Center)
- Virtual Network Services (VNS) Session Border Controller as a Service (SBCaaS)
- Webex Calling (Verizon Plan)
- Virtual Contact Center
- Unified Customer Experience (Digital CX)

These Voice Services SLAs are provided on the pages that follow.

Voice Over IP (VoIP) Service Level Agreement

1. VoIP Service Level Agreement

1.1 Verizon offers the following performance Service Level Agreements (SLAs) covering Jitter, Mean Opinion Score (MOS), Network Availability, Provisioning Interval and Time To Repair (TTR). These SLAs are available in the United States, Canada and Mexico and in the following European countries: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Spain, Sweden, Switzerland, and the United Kingdom and in the following Asia Pacific countries: Australia, Hong Kong, India, Singapore, and South Korea.

1.2 VoIP Service Level Agreement Credit Process - General. To receive a credit, Customer must submit its written request as set out in the table below within 30 business days after the month in which the SLA was not met. If Verizon confirms Customer's request (i.e., that the particular SLA was not met), then Customer shall receive a credit calculated as shown in the table below. No credits will be given with respect to VoIP Service not affected by the unmet SLA.

VoIP SLA	For Applicable Locations in Europe and Asia Pacific	For Locations within the U.S., Canada and Mexico
Applicable Network	Verizon's VoIP Network	Verizon's VoIP Network
SLA eligible VoIP related access method	Verizon Private IP Verizon Internet Dedicated in European countries only 3rd party access (unless excluded otherwise) in European countries only	US and Canada applicable: - Verizon Private IP - Verizon Internet Dedicated US only applicable: - Verizon Wireless LTE (unless excluded otherwise) - Verizon FiOS (unless excluded otherwise) 3rd party access (unless excluded otherwise)
Available Methods for Requesting Credit	Customer must submit its written request (email or FAX is acceptable) to its Verizon Account Team within the timescale defined in section 1.2 above. If a trouble ticket is required to document an outage or service event for credit compliance, a trouble ticket can be generated either through the Verizon Customer Service Center or through the web-based Verizon Enterprise Center. The number for the assigned Verizon Customer Service Center is printed on Customer's invoice. Access to the Verizon Enterprise Center can be requested by registering at the Verizon Enterprise Center portal: **enterprisecenter.verizon.com**.	Customer must complete and submit the online **Verizon Enterprise Solutions Verizon Business VoIP Jitter Credit Request Form** **Verizon Enterprise Solutions Verizon Business VoIP MOS Credit Request Form** **Verizon Enterprise Solutions VoIP Network Availability Credit Request Form** **Verizon Business VoIP TTR Credit Request Form.** as applicable. **Verizon Enterprise Solutions VoIP Provisioning Interval Credit Request Form**
MRC Service	The Verizon VoIP SLA credit (the	The Credit will be based upon the MRC

VoIP SLA	For Applicable Locations in Europe and Asia Pacific	For Locations within the U.S., Canada and Mexico
Credit Calculation	"Credit") will be based upon the monthly recurring charge (MRC) equivalent to the customer's monthly VoIP concurrent call fee. The Credit may also be based on the MRC for the related Verizon Internet Dedicated Service or Private IP Service, as applicable. The maximum amount of the Credit available to Customer for any calendar month shall not exceed the total of the simultaneous calling capacity MRC plus the applicable MRC for the related Internet Dedicated service under the Agreement.	equivalent to the customer's monthly VoIP concurrent call fee. The Credit may also be based on the applicable MRC for the related Verizon Internet Dedicated Service or Private IP Service, as applicable. For Business Connection, the MRC used to calculate the Credit is the customer's bundled MRC. The maximum amount of the Credit available to Customer for any calendar month shall not exceed the total of the simultaneous calling capacity MRC plus the applicable MRC for the related Internet Dedicated service under the Agreement. For Business Connection, the maximum amount of the Credit available to Customer for any calendar month shall not exceed the total of the bundled MRC.
Jitter Credit Calculation	If Verizon does not meet the Jitter SLA, the Customer will receive one day's share of their Verizon VoIP Service MRC Credit on all their provisioned concurrent calls across their enterprise.	
MOS Credit Calculation	If Verizon does not meet the MOS SLA, the Customer will receive one day's share of their Verizon VoIP Service MRC Credit on all their provisioned concurrent calls across their enterprise	
Network Availability Credit Calculation	If Verizon does not meet the VoIP Network Availability SLA due to an issue with the Verizon VoIP network and it is confirmed by Verizon as an issue solely related to VoIP and not Verizon Private IP or Verizon Internet Dedicated, then the Customer will receive (i) one day's share of their applicable Verizon VoIP Service MRC Credit on all their provisioned concurrent calls at the impacted site(s); and (ii) one day's MRC for their Verizon Private IP or Verizon Internet Dedicated service at the impacted site(s), multiplied by each hour Verizon fails to meet its VoIP Network Availability SLA commitment (as defined below). If the customer is using Enterprise Concurrent calls, the Verizon VoIP Service MRC Credit SLA credit will be calculated as a percentage (%) of their total Enterprise Concurrent calls based on telephone numbers provisioned at the site. The credit will be applied to each Verizon site affected and is based on the total downtime the customer experienced during the relevant month.	
TTR Credit Calculation	If Verizon does not meet the TTR SLA due to an issue with the Verizon VoIP network and it is confirmed by Verizon as being an issue solely related to VoIP and not Verizon Private IP or Verizon Internet Dedicated, then the Customer will receive (i) one day's share of their applicable Verizon VoIP Service MRC Credit on all their provisioned concurrent calls at the impacted site(s); and (ii) one day's MRC for their Verizon Private IP or Verizon Internet Dedicated service, multiplied by each hour Verizon fails to meet its VoIP TTR SLA commitment (as defined below).	

VoIP SLA	For Applicable Locations in Europe and Asia Pacific	For Locations within the U.S., Canada and Mexico
	If the customer is using Enterprise Concurrent calls, the Verizon VoIP Service MRC Credit SLA credit will be calculated as a percentage (%) of their total Enterprise Concurrent calls based on telephone numbers provisioned at the site. The credit will be applied to each affected Verizon VoIP site. The Customer may receive multiple TTR SLA credits in a given month.	
Provisioning Interval Credit Calculation	If Verizon fails to meet the Provisioning Interval SLA, and Verizon confirms such failure, Verizon will provide to Customer a Service Credit equivalent to the monthly recurring charge (MRC) equivalent to the customer's monthly VoIP concurrent call fee.	
Basis for SLA claim for Jitter and MOS	Verizon will use Verizon's public backbone statistics Web site to verify that the MOS SLA and the Jitter SLA standard was not met. If Verizon confirms Customer's request, then Customer may submit a claim for credit. A trouble ticket may be required.	
Basis for SLA claim for Network Availability and TTR	Customer must open a trouble ticket with Verizon while it is experiencing a VoIP Service problem. The calculation of unavailable time is based on trouble ticket times. The unavailable time starts when Customer opens a trouble ticket with Verizon and releases the VoIP Service for immediate testing. The unavailable time stops when the Applicable Network or access circuit trouble has been resolved and the VoIP Service is again available to Customer. If the Customer has multiple locations affected by an outage, the Customer may submit one ticket to address the multiple locations; however, the affected individual locations must be identified on the ticket.	
Basis for SLA claim for Provisioning Interval	The Provisioning Interval is calculated by computing the period of time beginning on the date Verizon submits the Customer's VoIP order to Verizon's provisioning group and ends on the date that Verizon determines the VoIP service is ready for activation.	

1.3 **Jitter SLA.** Also known as delay variation, jitter is defined as the variation or difference in the end-to-end delay between received packets of an IP or packet stream. The VoIP Jitter SLA provides that Verizon's monthly jitter performance within the Applicable Network will not exceed 1.0 millisecond. Performance is measured by periodically collecting data across the Applicable Network, from which a monthly average is derived. Jitter performance statistics are available for review at https://enterprise.verizon.com/terms/voipsla/voicequality/.

1.4 **Mean Opinion Score (MOS) SLA.** MOS is a measure (score) of the audio fidelity, or clarity, of a voice call. It is a statistical measurement that predicts how the average user would perceive the clarity of each call. The VoIP MOS SLA provides that the Applicable Network performance will not drop below 4.0 where MOS is calculated using the standards-based E-model (ITU-T G.107). Performance is measured by periodically collecting data across the Applicable Network, from which a monthly average is derived. MOS performance statistics are available for review at https://enterprise.verizon.com/terms/voipsla/voicequality/.

1.5 **VoIP Network Availability SLA.** The VoIP Network Availability SLA provides that Applicable Network will be available at least 99.99 percent of the time as measured on a monthly basis by trouble ticket time. The Applicable Network is considered not available for the number of minutes that a trouble ticket shows the Applicable Network was not available to Customer. The network availability SLA is not applicable to sites that do not use Verizon Internet Dedicated or Verizon Private IP service. Customer is responsible for tracking the time via trouble tickets that any portion of the VoIP Service is unavailable due to Applicable Network unavailability.

1.6 **Time to Repair SLA.** The VoIP Time to Repair (TTR) SLA provides that priority one (PTY 1) tickets will be resolved within 5 hours or less in the European and Asia Pacific countries listed above and within 4 hours or less within the United States, Canada and Mexico. PTY 1 Tickets are categorized as a "hard outage" where there is complete loss of VoIP Service or severe service degradation that results in Customer's inability to receive any inbound calls and/or complete any outbound calls from a given location using Verizon VoIP. "Time to Repair" is defined as time taken to restore VoIP Service during a Hard Outage based on trouble ticket time. The TTR SLA is not applicable to sites that do not use Verizon Internet Dedicated or Verizon Private IP service.

1.7 Provisioning Interval SLA

Provisioning Interval Scope. The Provisioning Interval SLA requires that the ordered VoIP services are ready for use within 20 calendar days of the date of the submission of the order to Verizon's provisioning group except for South Korea and Mexico.

Provisioning Interval SLA Exclusions. In addition to the General Exclusions, the Provisioning Interval SLA does not include any period of time arising out of or associated with the following:

- Delays in provisioning related to Customer actions, moves or scheduling difficulties
- Delays attributed to the provisioning of other services when ordered together with VoIP
- Delays resulting from changes to a previously accepted order for Service from Customer, its agents or vendors
- Any delays resulting from unavailability of Customer's premises, equipment, or facilities required to provision the Service
- Delays attributed to extending the Local Access demarcation point
- Delays resulting from inaccurate or incorrect order information
- Delays resulting from an order suspension due to credit issues involving Customer
- Service changes (Move, add, change activity)
- Porting of telephone numbers to Verizon

Any periods of delay attributable to the reasons above will be deducted from the provisioning interval time period.

2. Exclusions and Limitations to SLA Applicability.

2.1 **General Exclusions.** The following exclusions apply to all VoIP Service SLAs:

- Force Majeure Events; and
- Verizon network maintenance.

2.2 **VoIP Network Availability and TTR SLA Exclusions.** In addition to the General Exclusions, the VoIP Network Availability SLA and Time to Repair SLAs do not include time related to unavailability or outages resulting from:

- Customer-ordered third-party circuits;
- Inappropriate VoIP Service configuration change(s) made by or through Customer at the Verizon Enterprise Center web-site;
- Customer premise equipment including, but not limited to, Customer-provided PBX, black phones, SIP phones, firewalls, router/modem and/or analog/ethernet adapter;
- Acts or omissions of Customer or its users, or any use or user of the VoIP Service that is authorized by or enabled through Customer but outside the scope of Customer's VoIP Service; and
- "Customer Time," which is the time identified on the trouble ticket (if any) attributable to, or caused by, through no fault of Verizon, the following: (a) incorrect or incomplete contact information

provided by Customer which prevents Verizon from completing the trouble diagnosis and VoIP Service restoration; (b) Verizon being denied access to network components at the Customer location when access is required to complete trouble shooting, repair, diagnosis, or acceptance testing; (c) Customer's failure or refusal to release the circuit for testing; (d) Customer being unavailable when Verizon calls to close a trouble ticket or verify VoIP Service restoration, (e) any other act or omission on the part of Customer; or (f) down-time caused by the PTT or Local Exchange Carrier (LEC) for periods where the PTT's or LEC's maintenance support is not available.

Verizon reserves the right to amend any applicable SLA from time to time effective upon posting of the revised SLA where the SLA is set out or other notice to Customer of the change, provided that in the event of any amendment resulting in a material reduction of the SLA's service levels or credits, Customer may terminate Services without early termination liability (except for payment of all charges up to the effective date of the termination of any such Services) by providing Verizon at least 30 days written notice of termination during the 30 days following posting of such amendment.

Verizon IP Contact Center Service Level Agreement

1. **Overview.** Verizon offers the following performance Service Level Agreement ("SLA") to customers subscribing to Verizon's IP Contact Center Service. The SLA provides performance metrics for Verizon's IP Contact Center network, i.e., the backbone infrastructure of IP Contact Center services (for the purposes of this SLA, the "IPCC Network"), and covers Network Availability, Time To Repair ("TTR"), Network Jitter, and Network MOS.

2. **Demarcation.** The IPCC Network Routing Architecture (see Attachment 1) identifies the IPCC Network components covered by this SLA, and includes IPIVR Applications; that have been built, functionally tested, and deployed in the network by the customer or by Verizon. The demarcation points for the Network Jitter and Network MOS metrics of this SLA are defined as the Verizon VoIP Network Gateways for Inbound and Outbound TDM-terminated calls; and the Verizon VoIP Network Session Border Controllers for IP-terminated and IP Originated calls. The demarcation points for the Network Availability and Time To Repair ("TTR") metrics of this SLA include the Verizon-owned Long Distance Network Switches and infrastructure for TDM originated and terminated calls. All demarcation points are marked in red font and outlines.

3. I**PCC Network Availability SLA**

   The Network Availability SLA provides that the IPCC services (the "Service") is available to process calls at least 99.99% of the time as measured on a monthly basis by Priority 1 Trouble Ticket outage time.

   The Service is considered not available for the number of minutes that a Trouble Ticket shows the Service was not available to Customer. The unavailable time starts when (i) the Customer opens a Priority 1 Trouble Ticket with Verizon Customer Support [in the U.S. at 1-800-444-1111 or as otherwise specified directly to Customer or via Verizon's website; outside the U.S., at the telephone number specified directly to Customer or via Verizon's website] and (ii) provides Verizon with permission to test the affected Telephone Number(s). Upon Verizon's reasonable request, Customer will cooperate with and assist Verizon in the controlled testing of affected service elements. The unavailable time stops when the trouble ticket has been resolved and the Service is again available to Customer.

   Customer must open a Trouble Ticket with Verizon Customer Support while it is experiencing a Service problem. The associated Trouble Ticket(s) will record the calculation of unavailable time attributable to Verizon. One ticket can be submitted for simultaneous issues with different IPCC Transport services, however, the individual IPCC Service Numbers and/or Route Plans affected must be identified in the ticket.

   Where monthly Availability falls below the percentages specified in the table below, Customer will be entitled to a credit associated with one of the corresponding Availability percentages.

IPCC Network Monthly Availability*	
Availability – Less Than	**Credit****
99.99%	3%
99.80%	7%
99.70%	10%
99.60%	13%
99.50%	17%
99.40%	20%
99.30%	23%
98.90%	27%

98.80%	30%
98.70%	33%
98.60%	37%

IPCC Network Monthly Availability*	
Availability – Less Than	**Credit****
98.50%	40%
98.30%	43%
98.20%	47%
98.10%	50%

* Network Monthly Availability = Total Monthly Minutes (all IPCC Service numbers; based on a 30-day month) minus Total Outage Minutes for affected IPCC Service number(s) (in a month) divided by Total Monthly Minutes.

** Credits are calculated against Customer's total per-minute IPCC Service Transport Charges for the affected IPCC Service numbers in the affected month.

A Trouble Ticket is required to document a Network Availability outage for credit submission. To receive an SLA credit for IPCC Network Availability, Customer must submit its request using the standard "Invoice Inquiry" process available on the Verizon Enterprise Center ("VEC") within 30 business days after the month in which the Service Level is not met. The request must contain: (1) the Trouble Ticket number; (2) the date and time the Trouble Ticket was initiated; (3) the VoIP Inbound number that experienced the service outage and/or Route Plans affected; and (4) the total outage time.

4. **Time to Repair ("TTR") SLA.** The TTR SLA provides that valid Priority 1 tickets will be resolved as shown in the table below. "Time to Repair" is defined as time taken to restore Service during an Outage based on Trouble Ticket time. Unavailable time starts when Customer opens a Trouble Ticket with Verizon Customer Support [in the U.S. at 1-800-444- 1111 or as otherwise specified directly to Customer or via Verizon's website; outside the U.S., at the telephone number specified directly to Customer or via Verizon's website] and releases the Service for immediate testing. Unavailable time stops when the Service is again made available to Customer.

    Restore times will be based on amount of Outage time attributable to Verizon as recorded in the associated Trouble Ticket(s). The credit calculation shown in the table immediately below is based on the repair time for a given Outage as recorded in the Priority 1 Trouble Ticket.

Incident Repair Time (equals Total Unavailable Time per affected Telephone number per month**)**		Credit (calculated against Customer's total per-minute IPCC Service Transport Charges for the affected IPCC Service numbers in the affected month)
From Hours:Min:Sec	**To Hours:Min:Sec**	
0:00:00	3:59:59 (U.S.)	0%
0:00:00	4:59:59 (non-U.S.)	0%
4:00:00	7:59:59 (U.S.)	2%
5:00:00	7:59:59: (non-U.S.)	2%
8 Hours +		4%

5. **Jitter SLA (Contiguous U.S. and Europe)**

Jitter is the variation or difference in the end-to-end delay between received packets of an IP or packet stream. Jitter is usually caused by imperfections in hardware or software optimization or varying traffic conditions and loading. Excessive delay variation in packet streams usually results in additional packet loss which detrimentally affects voice quality. IPCC
Service monthly performance metrics for Jitter are reported at the following site:
http://www.verizonenterprise.com/terms/us/products/ipcontactcenter/performance/

The Jitter SLA provides that Verizon's Private IP ("PIP") or Internet network monthly jitter performance will not exceed 1.0 millisecond on average. Performance is measured by periodically collecting data across the IPCC Network demarcation points, defined in Section 2, above (Demarcation), from which a monthly average is derived.

To receive credit for a Jitter SLA claim, Customer must submit its request using the standard "Invoice Inquiry" process available on the Verizon Enterprise Center ("VEC") within 30 business days after the month in which the SLA was not met. Customer must provide all required information (e.g., account number). Verizon's Customer Support department will use the backbone statistics on its web site to verify that the Jitter SLA was not met.

If Verizon Customer Support confirms Customer's claim (i.e., that the Jitter SLA was not met), then Customer shall receive a credit to its account equal to one day's share of the Monthly Recurring Charge (MRC) for VoIP Inbound Subscription (for non-optimized) or the equivalent to one day's share of the MRC for VoIP Inbound Subscription (for optimized).

6. **MOS SLA (Contiguous U.S. and Europe)**

Mean Opinion Score ("MOS") is a measure (score) of the audio fidelity, or clarity, of a voice call. It is a statistical measurement that predicts how the average user would perceive the clarity of each call. The Verizon IPCC Service monthly performance metrics for MOS are reported at the following site:
http://www.verizonenterprise.com/terms/us/products/ipcontactcenter/performance/

The MOS SLA provides that the MOS measured across Verizon's IPCC Network demarcation points, as defined above in Section 2 (Demarcation), will not drop below 4.0 where MOS is calculated using the standards-based E-model (ITU-T G.107). Performance is measured by periodically collecting data across Verizon's PIP or Internet network, from which a monthly average is derived.

The MOS SLA (for the European Economic Area, EEA) provides that the MOS measured across Verizon's EEA IPCC Network demarcation points, as defined above in Section 2 (Demarcation), will not drop below 4.0 where MOS is calculated using the standards-based E-model (ITU-T G.107). Performance is measured by periodically collecting data across Verizon's contiguous EEA PIP or Internet network, from which a monthly average is derived.

To receive credit for a MOS SLA claim, Customer must submit its request using the standard "Invoice Inquiry" process available on the Verizon Enterprise Center ("VEC") within 30 business days after the month in which the SLA was not met. Customer must provide all required information (e.g., account number). The Verizon Customer Support department will use the backbone statistics on its web site to verify that the MOS SLA was not met.

If Verizon Customer Support confirms Customer's claim (i.e., that the MOS SLA was not met), then Customer shall receive a credit to its account equal to one day's share of the MRC for VoIP Inbound Subscription (for non- optimized) or the equivalent to one day's share of the MRC for VoIP Inbound Subscription (for optimized).

7. General Conditions

The appropriate non-compliance credit amount will be credited to Customer's account within 90 calendar days following Verizon's confirmation of Service Level non-compliance.

Service credits made by Verizon to Customer under this Service Level Agreement are the sole and exclusive remedy available to Customer with respect to any failure to meet a defined Service Level.

The total of all credits within any one month is limited to a maximum of 100% of Customer's IPCC Service usage charges per VoIP Inbound telephone number affected by any non-compliance with the Service Levels.

**8. Exclusions.** No credit will be due to Customer to the extent the SLA is not met because of –
- Any act or omission on the part of the Customer, its contractors or vendors, or any other entity over which the Customer exercises control or has the right to exercise control.
- A Force Majeure event, as defined in the Agreement.
- Scheduled maintenance by Customer or entities under Customer's direction or control.
- Scheduled maintenance by Verizon within Verizon's maintenance windows.
- Problems unrelated to the IPCC Network including but not limited to IP-IVR Application Program changes, local access origination, and termination segments such as:
  - IPCC Network components other than the Network Gateways and Session Border Controllers, IP Network Cloud, IPCC Service Controller, Verizon SCP/NCP and IP IVR Call Treatment.
  - Inappropriate IP-IVR Application or Configuration/Routing change(s) made by Customer through the Verizon Network Manager.
  - Customer Equipment that is not compliant with the IPCC Network Interoperability Specifications.

9. Definitions. Terms used in this SLA are defined as follows:

Terms	Definition
IPCC Service Number	The ICC Service Number is used to receive inbound calls and to connect to the IPCC Services.
Outage	Total loss of service or service degradation such that Customer is unable to use the full functionality of the IP Contact Center Service and Customer releases the Service for intrusive testing and resolution.
Trouble Ticket	The official record used to document a perceived problem with the Service or an Outage incident.
Priority 1 Trouble Ticket	Hard outage whereby there is a complete loss of the IP Contact Center Service or severe degradation that results in Customer's inability to receive or complete inbound calls via VoIP Inbound. • 50% or more of the location is out-of-service; • 50% or more of the ports/channels are out-of-service; • Critical Verizon network or system failure with no workaround capability.

Attachment 1
IPCC Network Architecture

IPCC Multi-Service Architecture – High Level View

Demarcation points are marked in red font and outlines.
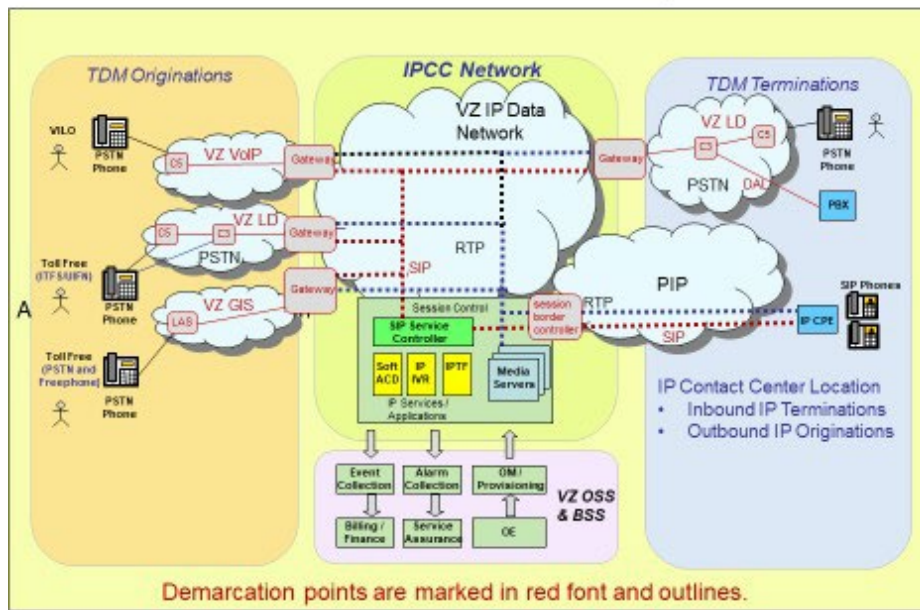
DDoS Shield - Service Level Agreement

This Service Level Agreement ("SLA") defines the service metrics which Verizon strives to meet in the delivery of DDoS Shield and the credits Customer is eligible to receive if those metrics are not met.

1. **Overview.** This SLA for DDoS Shield is set forth at http://www.verizonenterprise.com/terms/. Verizon reserves the right to amend this SLA from time to time effective upon posting of the revised SLA to the URL cited above or other notice to Customer; provided that, in the event of any amendment resulting in a material reduction of the SLA service levels or credits, Customer may terminate DDoS Shield without penalty by providing Verizon written notice of termination during the 90 days following notice of such amendment. This SLA sets forth Customer's sole remedies for any claim relating to failure to meet any standard set forth in this SLA. Verizon's records and data will be the basis for all SLA calculations and determinations.

2. **Claims.** To receive a remedy under this DDoS Shield SLA, Customer must notify Verizon within 40 business days of an SLA metric having not been met, with the exception of Clause 4.6 (Filtered Mitigation) where the Customer must notify Verizon within 5 calendar days of an SLA metric having not been met. No Service Credits will be issued if Customer does not notify Verizon within such 5-business day period. Verizon will verify any requested Service Credit and will confirm the amount of the credit, if applicable. Verizon's Service Credit calculation is the final and definitive assessment of any credit payable. If a number of unmet service metrics arise out of the same SLA failure, Customer will be entitled to the highest value Service Credit for one unmet metric. The total number of Service Credits for any cumulative SLA failure may not exceed the MRC.

3. **Credits.** Customer has the right to receive credits ("Service Credits") in case Verizon fails to meet such metrics. The SLA will become effective when Verizon has issued the Verification Notice except Installation SLA items which become active upon Verizon's acceptance of Customer's configuration submission. During any calendar month that the metrics set forth below are not met, Customer may be eligible for one Service Credit. Subject to Section 2 above, each subsequent SLA violation will result in an additional Service Credit. Each Service Credit is equal to 10% of the MRC. If Customer receives more than 4 Service Credits in 3 consecutive months or 10 Service Credits in a single month, the customer shall have the right to terminate its Contract for DDoS Shield services without liability on written notice to Verizon.

4. DDoS Shield SLA Metrics.

4.1. **Standard Installation.** Verizon will perform **s**tandard installation within 10 business days after (a) completion of the provisioning call with Customer and (b) Verizon's acceptance of Customer's configuration submission (Configuration Receipt). Alterations of the Customer submission will reset this Setup SLA time period.

4.2 **Expedited Installation.** When offered at Verizon's discretion, Verizon will perform a standard Installation. DDoS Shield will be installed within 5 business days from Configuration Receipt.

4.3. **Emergency Installation.** Verizon will perform emergency installation on a best efforts basis only.

4.4. **Availability of Service**. DDoS Shield services will have 99.999% availability and will not be unavailable for more than 5 consecutive seconds in any given calendar month. This means at any moment in time at least one DDoS Shield node will remain available.

4.5. **Service Portal Availability.** The Service Portal will have 99.9% availability.

4.6. **Time to Filtered Mitigation**

4.6.1 **Customer activated BGP redirection.** Within 5 minutes after Customer's Inbound Traffic is fully redirected to the Verizon DDoS Shield mitigation platform, Verizon will mitigate any DDoS attack traffic as Customer pre- specified in the Policies in the Portal. This mitigation under such Policies will ensure that no more than 5% of malicious attack traffic will be passed to Customer endpoint(s), based on the preconfigured rules. Customers should notify Verizon of the attack (phone or via portal) to ensure that any additional Elegant Mitigation is configured as required. In order for customer-activated BGP redirection to function, the customer must either:
1) peer with Verizon Route Servers as per the BGP Peers section of the portal; or 2) start a redirection of type "Under Attack" via the DDoS Shield portal.

4.6.2 **Phone activation.** Within 15 minutes after receiving a telephone request from a Technical Point of Contact, Verizon will perform Verizon activated BGP redirection of the Customer's inbound traffic to Verizon DDoS Shield mitigation platform. Verizon will mitigate any DDoS attack traffic to the traffic levels mutually agreed upon by Customer and Verizon during provisioning. This mitigation will ensure that no more than 5% of malicious traffic will be passed to Customer endpoint(s), based on the preconfigured, mutually agreed rules.

4.6.3 **Ongoing Mitigation tuning.** During the duration of active DDoS attack, Verizon DDoS Operations will perform ongoing tuning of needed mitigation perimeters to ensure total traffic returned to Customer endpoint(s) does not exceed the subscribed mitigation tier of service.

4.7 **BGP Routing Change.** Verizon will announce Customer's BGP route changes, for pre-configured IP ranges, to the Internet within 15 minutes after Verizon's receipt of Customer's request for such routing change.

4.8 **Standard Configuration Change.** Verizon will perform a standard configuration change within 24 hours after (a) completion of the provisioning call with Customer and (b) submission of the Customer's standard configuration change request via ticket, email or phone call to DDoS Operations and (c) Verizon's acceptance of Customer's configuration submission.

4.9 **Active Mitigation Configuration Change.** During active mitigations Verizon will perform updates for pre- configured IP ranges within 15 minutes after Verizon's acceptance of Customer's configuration submission.

5. **Exclusions.** The metrics set forth in Section 4 are not applicable in the case of any of the following

circumstances:

5.1   A request made by a Customer contact who is not a Technical Point of Contact.

5.2   The Customer premise router fails to maintain the Generic Routing Encapsulation (GRE) tunnel or becomes unavailable.

5.3   Customer provides inaccurate or insufficient configuration information.

5.4   A violation of Verizon's Acceptable Use Policy. The applicable AUP is available at the following URL: http://www.verizonenterprise.com/terms or other URL designated by Verizon. Customer shall ensure that each user of DDoS Shield adheres to the AUP. Verizon reserves the right to change the AUP from time to time, effective upon posting of the revised AUP at the designated URL or other notice to Customer.

5.5   Traffic redirection delays due to causes beyond Verizon's reasonable control.

5.6   Non-performance, negligent, unlawful acts or failure to act by Customer, its agents or suppliers.

5.7   Failure of non-Verizon network(s) connected to the Customer's endpoint(s).

5.8   Failure of Customer to implement access control lists (ACLs).

5.9   Failure of Customer to participate in DDoS Shield mitigation efforts, including the inability of Verizon to reach Customer by telephone or Customer's failure to make available English-speaking Technical Points of Contact to coordinate and communicate with Verizon during a DDoS attack.

5.10 Acts of God or events of Force Majeure.

5.11 Scheduled or emergency maintenance.

5.12 Suspension or termination of DDoS Shield by Verizon in accordance with the terms of the Contract.

6.   **Maintenance.** Verizon may perform maintenance on its systems at any time but will limit such maintenance to a maximum of 8 hours of scheduled maintenance during any one calendar month and 6 hours of maintenance during any single maintenance window. Scheduled maintenance may result in Customer's inability to access client-side web-based and mobile user interfaces, applications programming interfaces (APIs), or other Customer-accessible software, but will not impact Verizon's ability to mitigate DDoS attacks on Customer's behalf. Additionally, Verizon may take an emergency maintenance outage of no more than 4 hours once per month with 1 hour prior notice. During all maintenance windows, Verizon DDoS Operations will operationally withdraw the targeted device ensuring minimal traffic impact and the total remaining service platform will remain operational to service any ongoing or newly started mitigation.

Virtual Network Services + Service Level Agreement

1. Overview

This Service Level Agreement applies to Virtual Network Services (VNS). There are three management levels, each with different SLAs. The SLAs for each management level is provided separately in this Service Level Agreement.

a) Full Management Service Level - Under Full Management, Verizon manages the Virtual Network Function(s) (VNF) and supporting infrastructure. The SLA applies to each VNF subscribed to by Customer under VNS. The VNFs are Routing, SD WAN, Security, and WAN Optimization. Full Management SLA provides for Availability, Time to Repair, Installation, and Proactive Outage Notification Service Level Agreements for the VNF.

b) Co Management Service Level – Under Co Management, Verizon manages the VNFs and supporting infrastructure, however Customer can manage select set of SD WAN policies through the VEC or API Gateway. The SLA applies to SD WAN VNFs subscribed to by Customer under VNS. Co Management SLA provides for Availability, Time to Repair, Installation and Proactive Outage Notification Service Level Agreements for the VNF.

c) Monitor Management Service Level - Under Monitor Management, Verizon does not manage the VNFs but provides for management of the VNF host (uCPE or Verizon's Hosted Network Service (HNS)), notification of VNF outages, and recovery of VNFs. Monitor Management SLA provides for Availability and TTR of the uCPE or HNS, Installation for uCPE and Proactive Outage Notification of VNF, uCPE, and HNS platform failures.

This VNS SLA is in addition to Verizon provided Network Services SLAs.

Variances in SLA

The Virtual Network Services SLAs vary by geographic location and network provider.

Variances by Geographic Location. The location of a Customer Site determines the applicable service levels. The countries covered under the Virtual Network Services SLA are divided into three categories:

- U.S. – Contiguous 48 states and Hawaii with Verizon Networks
- Global Tier A locations with Verizon Networks

Europe	Asia Pacific	Americas
Austria	Australia	Alaska
Belgium	Hong Kong	Canada
Denmark	China	Argentina
Finland	Japan	Brazil
France	Singapore	Chile
Germany	South Korea	Colombia
Ireland		Mexico
Italy		Panama
Luxembourg		Peru
Netherlands		Puerto Rico
Norway		Venezuela
Spain		
Sweden		
Switzerland		

United Kingdom		

- Global Tier B – the countries with Verizon Networks that are not in the U.S. or Global Tier A locations

  Customer must also have a Verizon provided circuit (LTE, Private IP, or Verizon Internet) for management, the ability to conduct changes, and for restoration.

  In summary, Customer may have Verizon or approved U.S. 3rd Party Networks as primary or backup service to a Site but must have a Verizon provided circuit for management.

2. Service Level Agreement for Full Management

Under Full Management, Verizon manages the Virtual Network Function.

A VNF is defined as the Virtual Network Function servicing a specific Customer Site. There may be one or more VNF's servicing a specific Customer location. Each VNF is covered by this SLA.

Availability of the Virtual Network Function(s) is affected by supporting components provided by Verizon: Network, host platform (on premises server uCPE or Verizon's Hosted Network Service) and VNF software.

Failures of any of these components affect the availability of one or more of the VNF's to service a specific Customer Site. Verizon agrees to deliver service levels for each VNF and maintains and restores those components to meet those service levels.

The following are the Service Levels for Full Management:

Full Management				
Parameter	U.S. Verizon Network	Global Tier A Verizon Network	Global Tier B Verizon Network	U.S. 3rd Party Approved Networks
Availability with Dual circuits and dual VNF Backup	100%	100%	100%	100%
Availability with dual VNF and single	99.95%	99.95%	99.95%	99.95%
Availability No VNF	99.5%	99.5%	99.0%	99.5%
TTR	3.5 Hours	4 Hours	6 Hours	4 Hours
VNF Installation (Excludes Network	45 Calendar days (Excludes Hawaii)	Not Available	Not Available	Not Available
Proactive Outage Notification	15 Minutes	15 Minutes	15 Minutes	15 Minutes

The following are the definitions of back up:
> No VNF backup – Customer Site where the VNF has a single network circuit with no network service backup and no uCPE or HNS backup.

Single VNF backup –Customer Site where the VNF has a single uCPE or HNS, a primary network, service and backup network service (redundant circuit, Verizon provided cellular, DSL, or other backup through diverse circuits).

Dual VNF Backup—Customer Site where there are two uCPE or HNS hosts each with the VNF, a primary network, service and backup network service (redundant circuit, Verizon provided cellular, DSL, or other backup through diverse circuits)

For Availability and Time to Repair SLA metrics, the SLA excludes the amount of time that:
-Verizon is awaiting feedback or an approved maintenance window from Customer.
-The Trouble Ticket status is 'On Hold' status as requested by Customer
-The problem is caused by a software bug for which no workaround or patch is available.

Verizon monitors the stability of the service after an incident is perceived to be resolved.

The SLA clock will resume when the Customer permits repairs to continue or when Verizon receives feedback from the vendor or manufacturer on a software or configuration problem.

Full Management Availability SLA.

Full Management availability is based on the Virtual Network Function availability. Availability is based on the total number of minutes in a calendar month during which the VNF serving a Customer Site is available divided by the total number of minutes in that month. VNFs are considered available when they are performing the intended function (routing, optimization, etc.).

Calculation of Full Management Availability

Availability is the percentage of time that the Customer's VNF is available within a given calendar month. Availability applies to the ability of the VNF to perform its function. Total loss of the ability for the VNF to perform its function is considered a Hard Outage and results in a Priority One Ticket. Total Failure of VNF associated Network, uCPE or HNS, or VNF Software will constitute a Hard Outage and result in a Priority One Ticket.

The following hierarchy provides the relationship of components to the VNF:

The failure of the network supporting the Customer Site will be treated as a failure of all VNF's supporting the Customer Site, and the time associated with such network failure will be tracked for availability and TTR for each VNF serving the Customer Site.

The failure of uCPE or HNS supporting the Customer Site will be treated as a failure of all VNF's on the affected uCPE or HNS supporting the Customer Site. The time associated with such uCPE or HNS failure will be tracked for availability and TTR for each affected VNF.

The failure of a VNF itself, when the network and uCPE/HNS remain operational, will be tracked and time associated with such failure will be used in computations for availability and TTR metric.

Full Management Availability Calculation

The calculation of monthly VNF Availability (%) =1 - (Total minutes of Customer Site Hard Outage per month) X 100% / # days in month x 24 hours x 60 minutes.

Full Management Availability SLA Credit Structure and Amounts

Customers will be credited for Virtual Network Services monthly recurring charges for the VNF(s) experiencing a Hard Outage. Credits are applied based upon back up services for the VNF as follows:

Full Management Availability with Dual VNF Backup Credit as a % of Affected VNF MRC				
VNF Availability	U.S. Verizon Network	Global Tier A Verizon Network	Global Tier B Verizon Network	U.S. Approved 3rd Party Networks
From / To				
100%-99.90%	10%	10%	10%	10%
99.89%-99.50%	15%	15%	15%	15%
99.49%-99.00%	20%	20%	20%	20%
98.99%-98.00%	30%	30%	30%	30%
97.99%-97.00%	50%	50%	50%	50%
Less than 97%	100%	100%	100%	100%

Full Management Availability with Single VNF Backup Credit as a % of Affected VNF MRC				
VNF Availability	U.S. Verizon Network	Global Tier A Verizon Network	Global Tier B Verizon Network	U.S. Approved 3rd Party Networks
From / To				
100%-99.95%	N/A	N/A	N/A	N/A
99.94%-99.50%	5%	5%	5%	5%
99.49%-99.00%	10%	10%	10%	10%
98.99%-98.00%	15%	15%	15%	15%
97.99%-96.00%	25%	25%	25%	25%
95.99%-94.00%	50%	50%	50%	50%
Less than 94.00%	100%	100%	100%	100%

Full Management Availability with No VNF Backup Credit as a % of VNF MRC				
VNF Availability	U.S. Verizon Network	Global Tier A Verizon Network	Global Tier B Verizon Network	U.S. Approved 3rd Party Networks
From / To				
100%-99.5%	N/A	N/A	N/A	N/A
99.49%-99.00%	10%	5%	0%	5%
98.99%-97.00%	15%	15%	10%	15%
96.99%-95.00%	25%	20%	15%	20%
94.99%-93.00%	35%	25%	20%	25%
92.99%-90.00%	50%	30%	25%	30%
Less than 90%	100%	100%	100%	100%

Full Management Time to Repair (TTR).

TTR is the time to resolve a Hard Outage Trouble Ticket for the affected VNF(s)

Calculation of Full Management Time to Repair (TTR)

The Customer's TTR will be based on the Priority One (Hard Outage) time per VNF for each outage event. The TTR time starts when a Trouble Ticket is opened as a Priority One (Hard Outage) by Verizon or the Customer and concludes with the restoration of VNF. VNF Time To Repair (Hrs.) = Length of Trouble Ticket resolution for Priority One Ticket (Hard Outage per VNF).

Full Management Level TTR Credit Structure and Amounts

Customers will be credited for Virtual Network Services MRC for the affect VNF

Full Management Time to Repair Credit as a % of Affected VNF MRC				
Hard Outage Repair Time (Per Incident)	U.S. Verizon Network	Global Tier A Verizon Network	Global Tier B Verizon Network	U.S. Approved 3rd Party Networks
Less than 3.5 Hours	NA	NA	NA	NA
3:30:00-3:59:00 Hours	5%	NA	NA	NA
4:00:00-5:59:00 Hours	10%	5%	NA	5%
6 Hours Plus	15%	10%	5%	10%

Full Management Installation SLA.

The Virtual Network Services Installation SLA is defined as the period of time to install the VNF(s) at a Customer Site.

The installation SLA relates to the interval of time from order is placement and VNF availability for service to the Customer Site, defined by the date of Customer Site Acceptance. The installation is dependent upon the installation of the uCPE or HNS, and the VNF software. For Customer Sites with no existing network service, the VNS installation SLA starts when the network service is available.

Full Management Installation SLA Calculation

The Virtual Network Services Installation SLA time period starts the date the VNF order is placed and ends the date the Virtual Network Services function(s) is up and serving the Customer Site and the service is billable.

Credit Structure and Amounts for Full Installation SLA

Customer will receive a 50% refund of the non-recurring VNF installation fee for a Customer Site if Verizon fails to install Virtual Network Services service within 45 business days for that Customer Site for U.S. installations.

Full Management Installation SLA Exclusions

In addition to the general exclusions found in Appendix A, the following exclusions apply to the Virtual Network Services Installation SLA:

-Orders expedited by Customer; Installations outside of the 48 contiguous United States or circuits terminating outside of the 48 contiguous United States;

-Delays resulting from an order suspension due to Customer credit issues;

Full Management Proactive Outage Notification SLA.

The proactive outage notification SLA provides credits if Verizon fails to notify Customer of a Hard Outage (Priority One Trouble Ticket) by electronic means (e.g. pager or e-mail).

Full Management Proactive Notification SLA Calculation

The Notification Period begins with opening of a Trouble Ticket (Priority One) for a Hard Outage. Verizon has 15 minutes to notify Customer's primary point of contact from the start point of the Notification Period. Verizon is in compliance with the proactive outage notification SLA if the Customer opened the Trouble Ticket or contacts Verizon within the Notification Period. Verizon will provide the Trouble Ticket number and an initial status.

Full Management Proactive Notification Credit Structure and Amounts

Customer will receive a credit equal to 10% of the monthly recurring charge for each VNF that was impacted during a Hard Outage that was not properly notified.

Full Management Level Proactive Outage Notification SLA Exclusions

In addition to the general exclusions found in Appendix A, the following exclusions apply to the Proactive Outage Notification SLA:

- Periods of Soft Outage

- Events that affect multiple customers including without limitation cable or fiber cuts.

- Customer point of contact unavailability due to incorrect contact information or other cause.

3. Service Level Agreement for Co Management

All the service level attributes discussed in section above for Full Management are applicable except for the following additions / exclusions.

1. TTR SLA exclusion – Hard Outages on SD WAN link(s) due to policy changes made by Customer will be deemed Customer Time. Verizon is not responsible to remediate such changes and would advise Customer to revert policy changes made.

2. Notification of Outage or Performance Degradation – Verizon will notify Customer of any outage or degradation in performance metrics (SLA, Latency, Packet Loss) that happened due to Customer policy changes. Verizon is not responsible to remediate such changes and would advise Customer to revert policy changes made. Notifications are available for Verizon managed circuits only.

4. Service Level Agreement for Monitor Management Level Standard

Monitor Management Level- Verizon fully manages the uCPE or HNS, and provides Availability, TTR, and Proactive Notification SLA's for uCPE or HNS outages. The Monitor Management Level also provides Proactive Notification of VNF outages. VNF management in the Monitor Management Level is the responsibility of the Customer.

Under the Monitor Management Level, upon request only, Verizon will recover a VNF with a Monitor Management Level to a standard default configuration. In all cases, any special configurations or other changes from the default configuration are the responsibility of the Customer.

Verizon limits the number of recoveries without incurring additional charges to two times a year per VNF service.

Monitor Management Level SLA				
Parameter	U.S. Verizon Network	Global Tier A Verizon Network	Global Tier B Verizon Network	U.S. 3rd Party Approved Networks
uCPE and HNS Availability with uCPE/HNS Backup (Percent of Time that at least one uCPE HNS will be in	100%	100%	100%	100%
Availability with no uCPE/HNS Backup	99.5%	99.5%	99.0%	99.5%
TTR of uCPE/HNS	3.5 Hours	4 Hours	6 Hours	4 Hours
uCPE Installations (Excludes Network	45 days (Excludes Hawaii)	Not Available	Hot Available	Not Available
Proactive uCPE, HNS or VNF Outage	15 Minutes	15 Minutes	15 Minutes	15 Minutes

Availability means the uCPE or HNS is powered and is processing the VNF application.

Processing errors that do not affect the function do not detract from availability. uCPE and HNS Availability is based on the total number of minutes in a calendar month during which the uCPE or HNS serving a Customer Site is available divided by the total number of minutes in that month.

The calculation of monthly uCPE or HNS Availability (%) =1 - (Total minutes of Customer Site Hard Outage per month) X 100% / # days in month x 24 hours x 60 minutes

Monitor Management uCPE and HNS Availability with uCPE Backup Credit as a % of Affected uCPE MRC				
Availability	U.S. Verizon Network	Global Tier A Verizon Networks	Global Tier B Verizon Networks	U.S. Approved 3rd Party Networks
From / To				
100%-99.90%	10%	10%	10%	10%
99.89%-99.50%	15%	15%	15%	15%

99.49%-99.00%	20%	20%	20%	20%
98.99%-98.00%	30%	30%	30%	30%
97.99%-97.00%	50%	50%	50%	50%
Less than 97%	100%	100%	100%	100%

Monitor Management Level uCPE Availability with No uCPE Backup Credit as a % of Affected uCPE MRC				
Availability	U.S. Verizon Networks	Global Tier A Verizon Networks	Global Tier B Verizon Networks	U.S. Approved 3rd Party Networks
From / To				
100%-99.5%	N/A	N/A	N/A	N/A
99.49%-99.00%	10%	5%	0%	5%
98.99%-97.00%	15%	15%	10%	15%
96.99%-95.00%	25%	20%	15%	20%
94.99%-93.00%	35%	25%	20%	25%
92.99%-90.00%	50%	30%	25%	30%
Less than 90%	100%	100%	100%	100%

Monitor Management Level uCPE and HNS Platform Time to Repair Credit as a % of MRC				
Hard Outage Repair Time (Per Incident	US Verizon Network	Global Tier A Verizon	Global Tier B Verizon	U.S. 3rd Party Networks
Less than 3.5 Hours	NA	NA	NA	NA
3:30:00-3:59:00 Hours	5%	NA	NA	NA
4:00:00-5:59:00 Hours	10%	5%	NA	5%
6 Hours Plus	15%	10%	5%	10%

Monitor Management Level Time to Repair (TTR) SLA. TTR is the time to resolve a Hard Outage (Priority One) Trouble Ticket for the affected uCPE or HNS. Note: In the Monitor Management Level, Verizon will take action on uCPE and HNS outages. Customer is responsible for VNF Outages.

Monitor Management Level TTR SLA Calculation. The Customer's TTR will be based on the Priority One (Hard Outage) time per uCPE for each outage event. The TTR time starts when a Trouble Ticket is opened as a Priority One (a Hard Outage) by Verizon or the Customer and concludes with the restoration of uCPE. uCPE Time To Repair (Hrs.) = Length of Trouble Ticket resolution for Priority One Ticket (Hard Outage per VNF).

Monitor Management Level Proactive Outage Notification SLA.

The proactive outage notification SLA provides credits if Verizon fails to notify Customer of a Hard Outage of the uCPE, HNS platform, or VNF by electronic means (e.g. pager or e-mail).

Monitor Management Level Proactive Notification Calculation

The Notification Period begins with opening of a Trouble Ticket for a Hard Outage. Verizon

has 15 minutes to notify Customer's primary point of contact from the start point of the Notification Period. Verizon is in compliance with the proactive outage notification SLA if the Customer opened the Trouble Ticket or contacts Verizon within the Notification Period. Verizon will provide the Trouble Ticket number and an initial status.

Monitor Management Level Proactive Notification SLA Credit Structure and Amounts

Customer will receive a credit equal to 10% of the monthly recurring charge for each Virtual uCPE or HNS that incurred a Hard Outage and the Customer was not properly notified.

4.1 Virtual Network Services SLA Credit Application Structure and Process for Full, Co Management and Monitor Levels of Service

Credits are not cumulative month to month. If the SLA issue exceeds 30 days, the same schedule applies for each consecutive month. Credits are provided for each VNF serving the Customer Site and there in no maximum credit within each month. Verizon's data and calculations will be used to determine if an SLA has been missed and a credit is due. Verizon will issue a credit within 90 days if its determination of non-compliance with an SLA. Credits are available in accordance with this SLA, but credits are not available for more than the Full value of any one affected MRC or the sum of the value all affected MRC's.

Process for Customers to Apply for SLA Credits

Customer completes two steps in order to have an outage qualify for a Service Level Agreement credit. First, except for the Installation SLA, a Trouble Ticket needs to be opened in response to Virtual Network Services issues at the time of the Virtual Network Services issue. Second, a written request for credit must be made to the account team contact.

Opening a Trouble Ticket for the Availability, Time to Repair, and Proactive Outage Notification SLAs

A Priority One (Hard Outage) Trouble Ticket must be opened on Verizon's systems, either by Verizon or by Customer's request. A Trouble Ticket provides the record of Hard Outage events. Submitting a Service Level Agreement Credit Request

Installation SLA Credit Requests

Customer must make a written request (e-mail or fax) to the Verizon Account Team for a credit within 15 days after the date that the installation is completed that is beyond the 45 business day SLA with the following information:

- The Customer Site.
- The circuit identifier.
- The VNF.
- The date the VNF should have been installed.
- The date the VNF was installed.
- The date that the Customer order was approved.

Requests for Credits for Availability, Time To Repair, and Proactive Outage Notification SLA. Customer must make a request in writing (e-mail or fax) to the Verizon

Account Team for a credit within 15 days of the end of the month for which an SLA credit is due with the following information:

- The date the applicable outage(s) occurred.

- The time the outage(s) began and ended.

- The Customer Site(s) and circuit ID(s) for each affected Customer Site.

- Trouble Ticket number for each event.

Service Level Agreement Credit Time Limitation

If Verizon has failed to meet the same SLA for three consecutive months, Customer may elect to:

-continue Virtual Network Services with a limit of six months of credits for any individual SLA within a 12-month period.

-discontinue Virtual Network Services, at one, multiple, or all Customer Sites without liability except for charges incurred prior to discontinuation of Virtual Network Services.

Customer must submit a written disconnect notice to their Verizon Account Team within 30 days following the end of either the third or subsequent consecutive month of Verizon's failure to meet the SLA.

If 3rd Party Network provider causes in whole or in part the payout of SLA credits for three (3) consecutive months, Verizon has the following options:

-require a change of 3rd Party Network provider, as applicable.

- terminate its performance obligations under this Virtual Network Services SLA for the relevant SLA for Customer Sites with 3rd Party Network provider.

**Appendix A General
Exclusions**

The following exclusions apply to all Service Level Agreements contained in this document:

No credit will be due to the extent the SLA is not met because of any act or omission on the part of the Customer, its contractors or vendors, or any other entity over which the Customer exercises control or has the right to exercise control, other than acts or omissions of Verizon approved 3rd Party Network.

No credit will be due to the extent the SLA is not met because of a Force Majeure event, as defined in the Agreement.

No credit will be due to the extent the SLA is not met because of scheduled maintenance by Customer or entities under Customer's direction or control.

No credit will be due to the extent the SLA is not met because of scheduled maintenance by Verizon within Verizon's maintenance windows.

No credit will be due to the extent the SLA is not met because of the amount of time delays due to Customer Time.

No credit will be due to the extent the SLA is not met because proper power is not available to the uCPE. No credit will be due because of a failure caused by lack of environmental protection at the Customer premises that results in exposure of the uCPE to moisture, heat, or other damaging conditions.

Any SLAs related to uCPE without out-of-band access.

No credit will be due for which there is no Trouble Ticket opened.

No credit will be due for VNFs which have been installed for less than one Full calendar month.

Appendix B: Terms and Definitions

Circuit - A "circuit" is a connection and Local Access.

Connection - A "connection" is a port on Customer's WAN connected to Verizon or a 3rd Party Network.

Customer Provided Access-Customer remits payment for Local Access directly to their Local Access provider and Verizon does not invoice Customer for Local Access charges. Customer Site-A site is Customer's Virtual Network

Services location serviced by the VNF. Customer Time-

Time delays attributable to or caused by one or more of

the following:

a) Incorrect or incomplete information provided by Customer.
b) Verizon being denied access to uCPE or network components at the Customer location when access is required.
c) Failure or refusal by Customer to release the circuit for testing.
d) Customer unavailability where needed to close a Trouble Ticket.
e) Delays attributable to Customer management of the VNF to include Customer policies as sources of issues.

Hard Outage- VNF degradation such that Customer is unable to use VNF and Customer is prepared to release the circuit to Verizon for immediate testing.

HNS -- Hosted Network Service, Verizon's network platform capable of hosting VNF software to deliver routing, security, SD WAN, or WAN Optimization services.

Local Access- The portion of service between Customer's premises and a Verizon designated point-of- presence.

Soft Outage- Virtual Network Services Service degradation such that Customer is still able to use the Virtual Network Services Service and Customer is NOT prepared to release the circuit to Verizon for immediate testing.

Trouble Ticket-The result of reporting by a Customer to Verizon of either perceived Virtual Network Services outage or Virtual Network Services degradation.

uCPE - Universal CPE, a server or module located at the Customer Site capable of hosting VNF software to deliver routing, security, SD WAN, or WAN Optimization services.

U.S. 3rd Party Networks – Customer Provided Access or transport, serving a Customer Site or the Customer's entire network, from U.S. third parties, whether directly contracted by Customers with the providers or contracted through Verizon. Such U.S. 3rd Party Networks must be approved by Verizon. There is no provision for non-U.S. third party networks.

Verizon Networks- Verizon Networks in this SLA applicable to VNS are Verizon Private IP, Verizon Internet Dedicated, Ethernet LAN, Ethernet Line, LTE Wireless, Private LTE, and Verizon provided Broadband services.

Webex Calling and Voice Over IP Service Level Agreement

1. Service Level Agreement

1.1 **Verizon offers the following performance Service Level Agreements (SLAs), for Webex Calling:** Platform Availability; and for Voice Over IP (VoIP) Service: Jitter, Mean Opinion Score (MOS), Network Availability, Provisioning Interval and Time To Repair (TTR). These SLAs are available in the United States and other countries where Webex Calling and VoIP Service are sold, except that for the VoIP Service, these SLAs are not available in Australia, Hong Kong, Singapore and South Korea. These SLAs shall supersede the VoIP Service SLAs referenced in the applicable VoIP agreement.

1.2 **Service Level Agreement Credit Process - General**. To receive a credit, Customer must submit its written request as set out in the tables below within 30 Business Days after the month in which the SLA was not met. If Verizon confirms Customer's request (i.e., that the particular SLA was not met), then Customer shall receive a credit calculated as shown in the tables below. No credits will be given with respect to the Services not affected by the unmet SLA.

Webex Calling SLA	
Applicable Hosted Platform	Webex Calling application
Webex Calling Platform Availability Credit Calculation	Availability is the percentage of time that Webex Calling is available per user (i.e. not experiencing an outage) within a given billing month, as based upon recorded outage time in associated trouble ticket(s). Application Availability (%) = (available minutes per billing month in a particular region (U.S., EMEA, or Asia-Pacific) x 100 / number of days in billing month x 24 hrs. x 60 min <u>Credit Structure and Amounts</u> For each month that the Application Availability percentage for Webex Calling falls within a tier associated with a credit amount in the table shown in Section 1.3, Customer will be eligible for the related credit percentage of the aggregate MRC for all the Webex Calling packages to which Customer has subscribed for the affected user.

VoIP SLA	For Applicable Locations in Europe	For Locations within the U.S. and Canada
Applicable Network	Verizon's VoIP Network	Verizon's VoIP Network

VoIP SLA	For Applicable Locations in Europe	For Locations within the U.S. and Canada
SLA eligible VoIP related access method	Verizon Private IP Verizon Internet Dedicated 3rd party access (unless excluded otherwise)	US and Canada applicable: - Verizon Private IP - Verizon Internet Dedicated Verizon SCI US only applicable: - Verizon Wireless LTE (unless excluded otherwise) - Verizon FiOS (unless excluded otherwise) - 3rd party access (unless excluded otherwise)

VoIP SLA	For Applicable Locations in Europe	For Locations within the U.S. and Canada
Available Methods for Requesting Credit	Customer must submit its written request (email or FAX is acceptable) to its Verizon Account Team within the timescale defined in section 1.2 above. If a trouble ticket is required to document an outage or service event for credit compliance, a trouble ticket can be generated either through the Verizon Customer Service Center or through the web- based Verizon Enterprise Center. The number for the assigned Verizon Customer Service Center is printed on Customer's invoice. Access to the Verizon Enterprise Center can be requested by registering at the Verizon Enterprise Center portal: **enterprisecenter.verizon.com** .	Customer must complete and submit the online **Verizon Enterprise Solutions Verizon Business VoIP Jitter Credit Request Form** **Verizon Enterprise Solutions Verizon Business VoIP MOS Credit Request Form** **Verizon Enterprise Solutions VoIP Network Availability Credit Request Form** **Verizon Business VoIP TTR Credit Request Form.** as applicable. **Verizon Enterprise Solutions VoIP Provisioning Interval Credit Request Form**
MRC Service Credit Calculation	The Verizon VoIP SLA credit (the "Credit") will be based upon the monthly recurring charge (MRC) equivalent to the Customer's monthly VoIP concurrent call fee. The Credit may also be based	The Credit will be based upon the MRC equivalent to the Customer's monthly VoIP concurrent call fee. The Credit may also be based on the MRC for the related Verizon Internet Dedicated Service or Private IP Service, as applicable. For Business Connection, the MRC used

on the MRC for the related Verizon Internet Dedicated Service or Private IP Service, as applicable. The maximum amount of the Credit available to Customer for any calendar month shall not exceed the total of the simultaneous calling capacity MRC plus the applicable MRC for the related Internet Dedicated service under the Agreement.	to calculate the Credit is the Customer's bundled MRC. The maximum amount of the Credit available to Customer for any calendar month shall not exceed the total of the simultaneous calling capacity MRC plus the applicable MRC for the related Internet Dedicated service under the Agreement.

Jitter Credit Calculation	If Verizon does not meet the Jitter SLA, the Customer will receive one day's share of their Verizon VoIP Service MRC Credit on all of their provisioned concurrent calls across their enterprise.
MOS Credit Calculation	If Verizon does not meet the MOS SLA, the Customer will receive one day's share of their Verizon VoIP Service MRC Credit on all their provisioned concurrent calls across their enterprise.
Network Availability Credit Calculation	If Verizon does not meet the VoIP Network Availability SLA due to an issue with the Verizon VoIP network and it is confirmed by Verizon as an issue solely related to VoIP and not Verizon Private IP or Verizon Internet Dedicated then the Customer will receive (i) one day's share of their applicable Verizon VoIP Service MRC Credit on all their provisioned concurrent calls at the impacted site(s); and (ii) one day's MRC for their Verizon Private IP or Verizon Internet Dedicated service at the impacted site(s), multiplied by each hour Verizon fails to meet its VoIP Network Availability SLA commitment (as defined below). If the Customer is using Enterprise Concurrent calls, the Verizon VoIP Service MRC Credit SLA credit will be calculated as a percentage (%) of their total Enterprise Concurrent calls based on telephone numbers provisioned at the site. The credit will be applied to each Verizon site affected and is based on the total downtime the Customer experienced during the relevant month.
TTR Credit Calculation	If Verizon does not meet the TTR SLA due to an issue with the Verizon VoIP network and it is confirmed by Verizon as being an issue solely related to VoIP and not Verizon Private IP or Verizon Internet Dedicated, then the Customer will receive (i) one day's share of their applicable Verizon VoIP Service MRC Credit on all their provisioned concurrent calls at the impacted site(s); and (ii) one day's MRC for their Verizon Private IP or Verizon Internet Dedicated service, multiplied by each hour Verizon fails to meet its VoIP TTR SLA commitment (as defined below). If the Customer is using Enterprise Concurrent calls, the Verizon VoIP Service MRC Credit SLA credit will be calculated as a percentage (%) of their total Enterprise Concurrent calls based on telephone numbers provisioned at the site. The credit will be applied to each affected Verizon VoIP site. The Customer may receive multiple TTR SLA credits in a given month.
Provisioning Interval Credit Calculation	If Verizon fails to meet the Provisioning Interval SLA, and Verizon confirms such failure, Verizon will provide to Customer a Service Credit equivalent to the monthly recurring charge (MRC) equivalent to the Customer's monthly VoIP concurrent call fee.

Basis for SLA claim for Jitter and MOS	Verizon will use Verizon's public backbone statistics Web site to verify that the MOS SLA and the Jitter SLA standard was not met. If Verizon confirms Customer's request, then Customer may submit a claim for credit. A trouble ticket may be required.
Basis for SLA claim for Network Availability and TTR	Customer must open a trouble ticket with Verizon while it is experiencing a VoIP Service problem. The calculation of unavailable time is based on trouble ticket times. The unavailable time starts when Customer opens a trouble ticket with Verizon and releases the VoIP Service for immediate testing. The unavailable time stops when the Applicable Network or access circuit trouble has been resolved and the VoIP Service is again available to Customer. If the Customer has multiple locations affected by an outage, the Customer may submit one ticket to address the multiple locations; however, the affected individual locations must be identified on the ticket.
Basis for SLA claim for Provisioning Interval	The Provisioning Interval is calculated by computing the period of time beginning on the date Verizon submits the Customer's VoIP order to Verizon's provisioning group and ends on the date that Verizon determines the VoIP service is ready for activation.

1.3 **Webex Calling Platform Availability SLA**. The "Application Availability" is the amount of time the platform is operating properly per affected user within a given month. A Webex Calling application is deemed "available" if i) no outage has occurred in the network operating center (NOC) affecting the user which resulted in a trouble ticket being opened, or ii) no trouble tickets related to outages have been opened by Customer or by Verizon on behalf of Customer.

Application Availability %		Credit (% of MRC) for Webex Calling User MRCs
From	To	
99.99%	99.95%	10%
99.949%	99.00%	15%
98.99%	98.00%	20%
97.99%	97.00%	30%
96.99%	95.00%	50%
Less than 95.00%		100%

1.4 **Jitter SLA.** Also known as delay variation, jitter is defined as the variation or difference in the end-to- end delay between received packets of an IP or packet stream. The VoIP Jitter SLA provides that Verizon's monthly jitter performance within the Applicable Network will not exceed 1.0 millisecond. Performance is measured by periodically collecting data across the Applicable Network, from which a monthly average is derived. Jitter performance statistics are available for review at http://www.verizonenterprise.com/terms/us/products/advantage/voicequality/ for the United States and Canada and http://www.verizonenterprise.com/terms/emea/fr/voipsla/voicequality.xml for Europe.

1.5 **Mean Opinion Score (MOS) SLA.** MOS is a measure (score) of the audio fidelity, or clarity, of a voice call. It is a statistical measurement that predicts how the average user would perceive the clarity of each call. The VoIP MOS SLA provides that the Applicable Network performance will not drop below 4.0 where MOS is calculated using the standards-based E-model (ITU-T G.107). Performance is measured by periodically collecting data across the Applicable Network, from which a monthly average is derived. MOS performance statistics are available for review at http://www.verizonenterprise.com/terms/us/products/advantage/voicequality for the United States and Canada and http://www.verizonenterprise.com/terms/emea/fr/voipsla/voicequality.xml for Europe.

1.6 **VoIP Network Availability SLA.** The VoIP Network Availability SLA provides that Applicable Network will be available at least 99.99 percent of the time as measured on a monthly basis by trouble ticket time. The Applicable Network is considered not available for the number of minutes that a trouble ticket shows the Applicable Network was not available to Customer. The network availability SLA is not applicable to sites that do not use Verizon Internet Dedicated or Verizon Private IP service. Customer is responsible for tracking the time via trouble tickets that any portion of the VoIP Service is unavailable due to Applicable Network unavailability.

1.7 **Time to Repair SLA.** The VoIP Time to Repair (TTR) SLA provides that priority one (PTY 1) tickets will be resolved within 5 hours or less in the European countries listed above and within 4 hours or less within the United States. PTY 1 Tickets are categorized as a "hard outage" where there is complete loss of VoIP Service or severe service degradation that results in Customer's inability to receive any inbound calls and/or complete any outbound calls from a given location using Verizon VoIP. "Time to Repair" is defined as time taken to restore VoIP Service during a Hard Outage based on trouble ticket time. The TTR SLA is not applicable to sites that do not use Verizon Internet Dedicated or Verizon Private IP service.

1.8 Provisioning Interval SLA

Provisioning Interval Scope. The Provisioning Interval SLA requires that the ordered VoIP services are ready for use within 20 days of the date of the submission of the order to Verizon's provisioning group.

Provisioning Interval SLA Exclusions. In addition to the General Exclusions, the Provisioning Interval SLA does not include any period of time arising out of or associated with the following:

☐ Delays in provisioning related to Customer actions, moves or scheduling difficulties
☐ Delays attributed to the provisioning of other services when ordered together with VoIP
☐ Delays resulting from changes to a previously accepted order for Service from Customer, its agents or vendors
☐ Any delays resulting from unavailability of Customer's premises, equipment, or facilities required to provision the Service
☐ Delays attributed to extending the Local Access demarcation point
☐ Delays resulting from inaccurate or incorrect order information
☐ Delays resulting from an order suspension due to credit issues involving Customer
☐ Service changes (Move, add, change activity)
☐ Porting of telephone numbers to Verizon

Any periods of delay attributable to the reasons above will be deducted from the provisioning interval time period.

2. **Exclusions and Limitations to SLA Applicability**

2.1 **General Exclusions.** The following exclusions apply to all SLAs:
☐ Force Majeure Events; and
☐ Verizon network maintenance.

2.2 **Webex Calling SLA Exclusions**. In addition to the General Exclusions, the Webex Calling SLAs do not include time related to unavailability or outages resulting from:

☐ Interruptions or outages not reported by Customer, or for which no trouble ticket was opened;
☐ Services installed for less than one full calendar month;
☐ Scheduled maintenance by Customer or entities under Customer's direction or control;
☐ Trouble tickets associated with any act or omission of any third party;
☐ Changes to the recommended network or server configuration, trunking or dial plans without Verizon's prior agreement;

- Any act or omission on the part of the Customer, its contractors or vendors, or any other entity over which the Customer exercises control or has the right to exercise control, including without limitation, disconnection of power to the CPE;
- Webex Calling designs not approved by Verizon;
- Lapses of Webex Calling service before the Webex Calling is up and billable;
- Applications which are greater than two versions older than the current installed standard version (N-2);
- Customer-ordered third-party circuits;
- Performance impacting issues related to or resulting from (but not limited to) rogue network devices, viruses, worms, misconfigured unmanaged network devices attached to the LAN being managed or other impacting events/devices beyond the scope and control of Verizon.

2.3 **VoIP Network Availability and TTR SLA Exclusions.** In addition to the General Exclusions, the VoIP Network Availability SLA and Time to Repair SLAs do not include time related to unavailability or outages resulting from:

- Customer-ordered Third Party circuits;
- Inappropriate VoIP Service configuration change(s) made by or through Customer at the Verizon Enterprise Center web-site;
- Customer premise equipment including, but not limited to, Customer-provided PBX, black phones, SIP phones, firewalls, router/modem and/or analog/ethernet adapter;
- Acts or omissions of Customer or its users, or any use or user of the VoIP Service that is authorized by or enabled through Customer but outside the scope of Customer's VoIP Service; and

- "Customer Time," which is the time identified on the trouble ticket (if any) attributable to, or caused by, through no fault of Verizon, the following: (a) incorrect or incomplete contact information provided by Customer which prevents Verizon from completing the trouble diagnosis and VoIP Service restoration; (b) Verizon being denied access to network components at the Customer location when access is required to complete trouble shooting, repair, diagnosis, or acceptance testing; (c) Customer's failure or refusal to release the circuit for testing; (d) Customer being unavailable when Verizon calls to close a trouble ticket or verify VoIP Service restoration, (e) any other act or omission on the part of Customer; or (f) down-time caused by the PTT or Local Exchange Carrier (LEC) for periods where the PTT's or LEC's maintenance support is not available.

Virtual Contact Center Service Level Agreement

This Service Level Agreement describes the service levels (individually, an "SLA" or collectively, the "SLA") applicable to Verizon's provision of Virtual Contact Center pursuant to the Agreement executed by Verizon and Customer.

1. **Availability.** "Availability" is measured using the following formula:

    $$\text{ptime Availability} = \frac{U}{\text{Uptime} + \text{Downtime}}$$

    Uptime is a fixed value of 43,200 calculated by normalizing the days in a month to 30 multiplied by the hours and minutes (30 x 24 x 60 = 43,200).

    Downtime is the total minutes during which any of the Components listed below cannot be used by Customer to perform their tasks.

2. **Performance SLA**

2.1 **Uptime.** Verizon will deliver 99.99% of Uptime per month for Components of Service, which are those specific Virtual Contact Center features required for contact delivery included in and used by a Customer end-user ("End User") with Virtual Contact Center pursuant to the Agreement, excluding Long Distance and local loops, and are listed below in Section 2.2. If Verizon exceeds five (5) minutes (99.99% uptime) of Downtime in any given month, Customer may request a credit for such Downtime associated with a trouble ticket submitted by an End User. Upon such request and Verizon's verification of the trouble ticket and the Downtime, Verizon will issue a credit to Customer.

2.2 **Components.** Virtual Contact Center components covered by this SLA include:
   - inTouch Reporting
   - dbConnector
   - Core system (the ability to deliver a contact) and
   - Agent station/interface.

2.3 **Credits**

2.3.1 For any complete component failure experienced by an End User on any given day which does not meet the 99.99% Uptime service level described above, upon request, Verizon will credit the Customer 1/30th of the monthly recurring charges ("MRC") associated with the claiming End User. The maximum credit payable in any monthly billing period will not exceed one hundred percent (100%) of the aggregate MRC for all Virtual Contact Center service billed to Customer in the month for which an SLA claim is made.

2.3.2 Downtime does not include any time during which any of the Components could not be used by Customer to perform their tasks due to the following:
   - End User's equipment, software, facility, databases, or operator error;
   - An interruption in End User's connection to the Internet;
   - An interruption in End User's telephony or voice service, local or long distance;
   - Maintenance of Component software;
   - Force Majeure events as defined in the Agreement.

2.3.3 Requests for a credit must be submitted to Verizon within thirty (30) days following the date of the outage. Verizon considers a request submitted when Verizon receives from Customer an email requesting a refund and identifying:

- The Customer's name and business unit ID;
- Date(s) and approximate beginning/ending time of the outage; and
- The Virtual Contact Center component(s) affected by the outage.

2.3.4   Verizon will provide the credit within ninety (90) days following the month in which Customer's credit request was received.

3.   Maintenance SLA

3.1   **Software.** For any software maintenance event for which Customer has provided Verizon notification of end user impact and such impact is verified by Verizon, Verizon will credit Customer 5% for MRC charges associated with that end user. The maximum credit issued in any monthly billing period will not exceed 100% of the aggregate amount of the MRC for VCC services billed in that month. The MRC for each VCC service is the portion of the aggregate VCC service billing in each monthly billing period attributable to that VCC service. No Credit will be issued for outages that are during the scheduled maintenance window.

3.2   **Components.** Virtual Contact Center components covered by this Maintenance SLA include:
   3.2.1.1   Core system (the ability to deliver a contact) and
   3.2.1.2   Agent station/interface

3.3   **Credits.** Requests for a credit must be submitted to Verizon within thirty (30) days following the date of the component outage. Verizon considers a request submitted when Verizon receives from Customer an email requesting a refund and identifying:
   3.2.1.3   The Customer's name and business unit ID,
   3.2.1.4   Date(s) and approximate beginning / ending time of the outage and
   3.2.1.5   The Component(s) affected by the outage.

3.3.1   Verizon will provide the credit within ninety (90) days following the month in which Customer's credit request was received.

Verizon Digital CX Service Level Agreement (SLA)

1. **Overview.** This SLA provides performance metrics and provisions for Digital CX. Digital CX is a cloud- based solution that provides virtual agent, social engagement, knowledge management , and social engagement functionality, including management tools and reporting dashboards. Capitalized terms that are not defined in Section 4 (Terms and Definitions) are defined in the Customer's Digital CX Service Attachment.

2. **Verizon Digital CX SLAs.** Verizon will use commercially reasonable efforts to meet or exceed the relevant SLAs described below. Verizon will provide access to a reporting tool that details performance against the SLAs for each month.

2.1. Digital CX Availability

Digital CX Availability is defined as the availability of each feature of Digital CX (i.e. Virtual Agent, Live Agent, Knowledge Assist, Social Intelligence, Social Command Center, and Social Outbound Campaign) to receive and process Digital CX transactions from a Customer, its customers or direct end users and to send responses back to a Customer, its customers or direct end users. Digital CX Availability is measured for each calendar month for each feature, calculated as set forth below. Customer networks, connectivity to Verizon, or Customer software availability is not covered by this SLA.

Customer completes two steps in order to have an outage qualify for an SLA credit. First, Customer must open a trouble ticket in the Digital CX Portal. Second, Customer must make a written request for credit to the Verizon account team.

2.1.1.   Availability Calculation

Metric	Calculation
Planned Digital CX Availability	Available Time in Month – Scheduled Outages
Actual Digital CX Availability	Planned Digital CX Availability – Unavailability
Digital CX Availability Level (%)	(Actual Digital CX Availability / Planned Digital CX Availability) x 100

2.1.2.   Availability Performance Credits

If the Digital CX Availability Level percentage for a Digital CX feature in any calendar month falls within one of the ranges set forth in the Table 1 that is eligible for a credit, then Customer may request a monthly recurring charge (MRC) credit of the corresponding percentage for such month for such feature.

Table 1. Availability Performance Credits

Digital CX Availability Level:	MRC Credit:
≥ 99.97%	0%
> 99% but < 99.97%	2%
> 98% but ≤ 99%	4%
> 97% but ≤ 98%	6%

Digital CX Availability Level:	MRC Credit:
> 96% but ≤ 97%	9%
> 95% but ≤ 96%	15%
Equal to or less than 95%	20%

3. **SLA Exclusions.** Verizon is not responsible to pay a credit for failure to meet any SLA to the extent that such failure is due to or arising in connection with any of the following:

- Any act or omission of Customer or Customer's third party vendors including i) delays by Customer's third party vendors to respond or provide the necessary fix or resolution to a problem, or ii) inaccurate or incomplete instructions or information provided by Customer's third party vendors to Verizon;

- Any failure by Customer's third party vendors to comply with its respective responsibilities under this Agreement;

- A Force Majeure Event; or

- Outages caused by customizations to the Digital CX platform configuration written or modified by the Customer or the Customer's third party vendors (other than third party vendors acting as Verizon's subcontractor).

4. **Terms and Definitions**

Term	Definition
Scheduled Outages	The amount of time Verizon temporarily suspends operation of a Digital CX feature to perform scheduled or emergency maintenance.
Unavailability	The total time that a Digital CX feature is not available in a calendar month minus Scheduled Outages.

Data Services SLAs

Verizon's Data Services include the following SLAs:

- Dedicated Internet
- Private IP/MPLS
- VSAT (Private IP Satellite)
- Dedicated E-Line
- Switched E-Line
- WAVE Services
- Virtual Network Services (VNS), which include:
  - SD-WAN (VIPTELA)
  - Wide Area Network (WAN Optimization) Riverbed

These Data Services SLAs are provided on the pages that follow.

Internet Dedicated Service Level Agreement

1   General

1.1   **Germany Specific Terms.** For Agreements under German law, all of the quality objectives that follow should be understood as voluntary commitments on the behalf of Verizon, rather than amendments to the services description for the Service, which forms part of the SOF. They are not assurances in the sense of warranties for which Verizon is liable. These commitments are made free of charge, and they are not meant to be guarantees by the means of the German Civil Code (BGB). They shall furthermore not extend the rights Customer is entitled to by the BGB if Verizon is in breach of contract. Claims for compensation are determined solely by the scope of services defined in the Service Description and the quality levels given therein.

1.2   **Austrian Specific Terms.** For Agreements under Austrian law, all of the quality objectives that follow should be understood as voluntary commitments on the behalf of Verizon, rather than amendments to the services description for the Service, which forms part of the SOF. They are not assurances in the sense of warranties for which Verizon is liable. These commitments are made free of charge and any liability of Verizon for their achievement is excluded.

1.3   **Claims.** In order to make a valid claim the Customer needs to: Report any fault that constitutes a failure to meet the Service Level Agreement (SLA) to Verizon by raising a trouble ticket within 72 hours of the fault; and make a claim in writing within 30 days from the time the trouble ticket is closed.

1.4   **Maximum Credit.** The maximum credit payable in any month in relation to the Service shall be the MRC in respect thereof.

1.5   **General Exclusions.** No Service Credits will be payable, if the failure to reach any Service Level Standard is due to

- CPE associated with the Service,
- Customer-ordered access circuits,
- Customer's applications, equipment or facilities,
- acts or omissions of Customer or user of the Internet Dedicated Service authorized by Customer, including any scheduled maintenance on the part of Customer, Customer contractors or Customer vendors,
- scheduled maintenance on the part of Verizon,
- acts or omissions on the part of any third party other than a local access provider over which Verizon exercises control,
- periods of Service degradation, such as slow data transmission, where a Priority 1 trouble ticket has not been opened with Verizon and Customer has not released its Service for immediate testing, A "Priority 1 trouble ticket" means a total loss of Service or degraded Service to the extent that it is unusable by Customer and Customer is prepared to release its Service for immediate testing.
- Customer inquiry for circuit monitoring purposes only,
- Force Majeure Events.

1.6   **Internet Dedicated Essential Plan Exclusion.** No Service Credits will be payable if a failure to reach any Service Level Standard occurs while under the Internet Dedicated Essential Plan.

1.7   **"Scheduled Maintenance"** shall mean any maintenance on the Verizon hub to which Customer's circuit is connected of which Customer is notified 7 days in advance. Notice of Scheduled Maintenance will be provided to Customer's designated point of contact by a method elected by Verizon (e.g., email). Upon receiving such notice, Customer may request to have such maintenance postponed to a later date if agreed to by Verizon.

1.8   **Measurement of Network performance.** Network Latency, Network Packet Delivery, Network Jitter, and Network Mean Opinion Score (MOS) shall be measured by averaging sample measurements taken during a calendar month between Verizon-designated backbone routers ("Hub Routers"). Each month's Network performance statistics relating to Network Latency, Network Packet Delivery,

Network Jitter, and Network MOS shall be posted at http://www.verizonenterprise.com/about/network/latency/.

2 Availability Service Level Standard

2.1 **Availability Scope.** Verizon's Availability Service Level Standard provides that the Network (as defined in the applicable Agreement) will be available 100% of the time.

2.2 **Network Availability.** "Network Unavailability" consists of the number of minutes that the Network or a Verizon- ordered access circuit was not available to Customer, and includes unavailability associated with any maintenance at the Verizon data center where Customer's circuit is connected other than Scheduled Maintenance (defined above). Network Unavailability will not include any unavailability resulting from causes set out in the General Exclusions section above.

2.3 **Availability Remedy.** If Verizon fails to meet the Service Availability Service Level Standard during any given calendar month in accordance with the above, for each cumulative hour of Network Unavailability or fraction thereof in any calendar month, Customer shall be entitled to receive a Service Credit equivalent to the pro-rated charges for 1 day of the MRC for the Service with respect to which a Service Availability Service Level Standard was not met and the pro-rated charges for 1 day of the MRC Customer pays for Verizon-provided Access to the Service. For Services delivered in Spain, such Service Credit will be refunded to Customer automatically in the following invoice.

3 Time to Repair (TTR) Service Level Standard

3.1 **TTR Scope.** The TTR Service Level Standard is to restore the Service following an event that results in the outage of a circuit within

- 4 hours in USA,
- 5 hours in Canada, Europe and AsiaPacific, and
- 8 hours in Latam.

3.2 **TTR Measurement.** The TTR time starts when a trouble ticket is opened by Verizon or Customer after the outage of a circuit other than for outages associated with the General Exclusions stated above and concludes with the restoration of the affected circuit.

3.3 **TTR Remedy.** If Verizon fails to meet the TTR Service Level Standard in a month, Customer shall be entitled to receive a Service Credit equivalent to the pro-rated charges for 1 day of the Verizon MRC for the Service with respect to which this TTR Service Level Standard has not been met, provided that Customer may obtain no more than 1 Service Credit per day, irrespective of how often in that day Verizon failed to meet the TTR Service Level Standard. For Services delivered in Spain, such Service Credit will be refunded to Customer automatically in the following invoice.

4 Network Latency Service Level Standard

4.1 **Network Latency Scope.** Verizon's Network Latency Service Level Standard provides average round-trip transmissions times in milliseconds (ms) for the following network areas:

- North America: 45 ms or less between Hub Routers in North America.
- Europe: 30 ms or less between Hub Routers in Europe.
- Transatlantic: 90 ms or less between a Hub Router in the New York metropolitan area and a Hub Router in the London metropolitan area.
- Transpacific: 160 ms or less between a Hub Router in the Los Angeles metropolitan area and a Hub Router in the Tokyo metropolitan area.
- Europe to Asia Pacific: 250 ms or less between a Hub Router in the United Kingdom and in a Hub Router in India.
- Asia Pacific: 125 ms or less between Hub Routers in Asia Pacific.
- Latin America: 140 ms or less between Hub Routers in Latin America.

4.2 **Network Latency Remedy.** If Verizon fails to meet any Network Latency Service Level Standard in a month, Customer's account shall be automatically credited for that month. The credit will equal the

pro-rated charges for 1 day of the Verizon MRC for the Internet Dedicated Service with respect to which the Service Level Standard has not been met.

5   Network Packet Delivery Service Level Standard

5.1   **Network Packet Delivery Scope.** Verizon's Network Packet Delivery Service Level Standard provides average packet delivery percentages for the following network areas:

- North America: 99.5% between Hub Routers in North America
- Europe: 99.5% between Hub Routers in Europe.
- Transatlantic: 99.5% between a Hub Router in the New York metropolitan area and a Hub Router in the London metropolitan area.
- Transpacific: 99% between a Hub Router in the Los Angeles metropolitan area and a Hub Router in the Tokyo metropolitan area.
- Europe to Asia Pacific: 99% between a Hub Router in the United Kingdom and in a Hub Router in India.
- Asia Pacific: 99% between Hub Routers in Asia Pacific.
- Latin America: 99% between Hub Routers in Latin America

5.2   **Network Packet Delivery Remedy.** If Verizon fails to meet any Network Packet Delivery Service Level Standard in a month, Customer's account shall be automatically credited for that month. The credit will equal the pro-rated charges for 1 day of the Verizon MRC for the Internet Dedicated Service with respect to which the Service Level Standard has not been met.

6   Network Jitter Service Level Standard (available only for service in the North America and in Europe)

6.1   **Network Jitter Scope.** Verizon's Network Jitter Service Level Standard provides that average jitter will not exceed 1 ms between Hub Routers in North America, and between Hub Routers in Europe.

6.2   **Network Jitter Remedy.** If Verizon fails to meet the Network Jitter Service Level Standard in a month, Customer shall be entitled to receive a Service Credit equivalent to the pro-rated charges for 1 day of the Verizon MRC for the Internet Dedicated Service with respect to which the Network Jitter Service Level Standard has not been met.

7   Network Mean Opinion Score (MOS) Service Level Standard (available only for service in the North America and in Europe)

7.1   **Network MOS Scope.** Verizon's MOS Service Level Standard provides that the average MOS performance is not less than 4.0 between Hub Routers in North America, and between Hub Routers in Europe.

7.2   **Network MOS Remedy.** If Verizon fails to meet the Network MOS Service Level Standard in a month, Customer shall be entitled to receive a Service Credit equivalent to the pro-rated charges for 1 day of the Verizon MRC for the Internet Dedicated Service with respect to which the MOS Service Level Standard has not been met.

8   Outage Reporting Service Level Standard

8.1   **Outage Reporting Scope.** Verizon's Outage Reporting Service Level Standard is to notify Customer within 15 minutes after Verizon's determination that Customer's service is unavailable.

8.2   **Outage Reporting Process.** Verizon's standard procedure is to ping Customer's router. If Customer's router does not respond after 2 consecutive 5-minute ping cycles (for service in the Asia Pacific region, North America and Latin America) or 5 2.5-minute ping cycles (for service in Europe), Verizon will deem the service unavailable and will contact Customer's designated point of contact by a method elected by Verizon (e.g., e-mail). Customer is solely responsible for providing Verizon accurate and current contact information for Customer's designated points of contact. Verizon will be relieved of its obligations under this Outage Reporting Service Level Standard if Verizon's contact information for the Customer is out of date or inaccurate.

8.3   **Outage Reporting Remedy.** If Verizon fails to meet the Outage Reporting Service Level Standard,

Customer shall be entitled to receive a Service Credit equivalent to the pro-rated charges for 1 day of the MRC for the Service with respect to which the Outage Reporting Service Level Standard has not been met, provided that Customer may obtain no more than 1 Service Credit per day, irrespective of how often in that day Verizon failed to meet this Outage Reporting Service Level Standard.

9   Denial of Service (DOS) Attack Response Service Level Standard

9.1   **DOS Attack Response Scope.** Verizon will respond to DOS attacks reported by Customer within 15 minutes of Customer opening a complete trouble ticket with the Verizon Customer Support. Verizon defines a DOS attack as more than 95% bandwidth utilization.

9.2   **DOS Attack Response Process.** To open a Trouble Ticket for DOS, Customer must call the Verizon Customer Support and state: "I am under a Denial of Service Attack". A complete Trouble Ticket consists of Customer's Name, Account Number, Caller Name, Caller Phone Number, Caller Email Address and Possible Destination IP address / Type of Attack. Once engaged, Verizon Customer Support within the Security Operations Centre (SOC) will investigate the problem. They will provide confirmation that Customer is targeted by a DOS attack (rather than experiencing an internal or external routing issue). If the SOC concludes that the Customer is under active attack, they will take measures commercially appropriate for the type and level of attack. These measures may include placing filters on the routers in our network, black holing connections from the attack source network or active co- operation with the Internet Provider that provides service to the source of the attack when it can be clearly defined. Any remedies offered will be subject to the full co-operation of Customer. Verizon cannot guarantee that they will be able to mitigate or find a resolution that provides continued service to Customer.

9.3   **DOS Attack Response Remedy.** If Verizon fails to meet the DOS Attack Response Service Level Standard in a month, Customer shall be entitled to receive a Service Credit equivalent to the pro-rated Charges for 1 day of the Verizon MRC for the Service with respect to which this DOS Attack Response Service Level Standard has not been met, provided that Customer may obtain no more than 1 Service Credit per day, irrespective of how often in that day Verizon failed to meet the DOS Attack Response Service Level Standard.

10   Installation Service Level Standard

10.1 **Installation Scope**. Verizon's Installation Service Level Standard is to have installation of a Verizon-ordered access circuit and activation of a Verizon port completed by the date to which Verizon commits to deliver the Service ("Customer Due Date").

10.2 **Installation Measurement.** The Installation Service Level Standard is calculated by computing the period of time beginning on the date Verizon accepts the Customer order and ending on the Service Activation Date.

10.3 **Installation Exclusions.** In addition to the General Exclusions, as set out in the General Exclusion Section above, the Service Installation Service Level Standard does not include any minutes associated with the following:

- Delays in installation related to Customer actions, moves or scheduling difficulties.
- Delays resulting from changes to a previously accepted order for Service from Customer, its agents or vendors.
- Any delays resulting from unavailability of Customer's premises, equipment, or facilities required to install the Service.
- Delays attributed to extending the Local Access demarcation point.
- Delays resulting from inaccurate or incorrect order information from Customer.
- Delays resulting from an order suspension due to credit issues involving Customer.

Any periods of delay attributable to the reasons above will be deducted from the Service installation time period.

10.4 **Installation Remedy.** If Verizon fails to meet the Installation Service Level Standard, Customer shall be entitled to receive a Service Credit equivalent to 50% of the first month's MRC for the

applicable service.

Private IP Service + Global Private IP Service Level Agreement

Global Private IP Service Level Agreement

1. **Service Level Agreement Summary.** The Private IP Service Level Agreement ("PIP SLA") covers Global Private IP Services (collectively, the "Service" or "Private IP Service"). The PIP SLA consists of several service level standards ("Service Level Standards"). Customer may qualify for credits when the Verizon PIP Network performance fails to meet the stated thresholds established for a Service Level Standard. The PIP SLA may also cover the transport components (not the CPE components) of the Managed Private IP Service product if offered as a part of a Managed Private IP solution. The managed service components of a Managed Private IP solution may be covered in a separate Managed Services, Service Level Agreement.
2. **Definitions of Terms.** Terms used in this document are defined in the Terms and Definitions section at the end of this document.
3. **Service Level Standard Performance Measures.** The PIP SLA Service Level Standards are:

Parameter	Access Type	Scope	U.S.	Global Tier A	Global Tier B	Global Tier C
Availability	Platinum	End-to-End	100%	100%	100%	NA
	Gold	End-to-End	99.9%	99.9%	99.9%	99.5%
	Silver	End-to-End	99.5%	99.5%	99.5%	99.0%
	Bronze	End-to-End	99.0%	99.0%	99.0%	99.0%
Time To Repair (TTR)	Platinum	End-to-End	2 Hours	4 Hours	4 Hours	NA
	Gold	End-to-End	4 Hours	5 Hours	8 Hours	8 Hours
	Silver	End-to-End	4 Hours	8 Hours	8 Hours	8 Hours
	Bronze	End-to-End	24 Hours	24 Hours	24 Hours	24 Hours
Service Installation		End-to-End	≤1.5M** 30 Business Days ≤ 45M** 45 Business Days Others 100% by Customer's Due Date	100% by Customer's Due Date	100% by Customer's Due Date	100% by Customer's Due Date
Moves, Adds or Changes (MAC)		End-to-End	10 Business Days (Excluding Local Access Requests)	100% by Customer's Due Date	100% by Customer's Due Date	100% by Customer's Due Date
Core Network Transit Delay (C-NTD) *		P-Core	≤ 36 ms	NA	NA	NA

* Core Network Transit Delay (C-NTD) is only applicable to the US P-Core Network. Measurements between distinct PE pairs are given by the Packet Transit Delay (PTD) Service Level Standard in the table below.

**Excludes any facilities builds.

Parameter	Scope	EF/COS5	AF4x/COS4	AF3x/COS3	AF2x/COS2	AF1x/COS1	BE/COS0
Packet Delivery Ratio (PDR)*	PE-to-PE	≥ 99.995%	≥ 99.99%	≥ 99.99%	≥ 99.99%	≥ 99.99%	≥ 99.5%
Packet Transit Delay (PTD)	PE-to-PE	See applicable Packet Transit Delay standards below					
Jitter	PE-to-PE	< 5 ms	< 15 ms	NA	NA	NA	NA
Mean Opinion Score (MOS) **	P-Core	≥ 4.0	NA	NA	NA	NA	NA

* Packet Delivery Ratio (PDR): for Private IP Secure Cloud Interconnection ("SCI"), only BE/COS0 applies.
** Mean Opinion Score (MOS) is only applicable to the U.S., EMEA

and APAC regions. Private IP Gateway:

Parameter	Service Type	Scope	U.S.	Global Tier A	Global Tier B	Canada, Puerto Rico, U.S. Virgin Islands
Availability	SCI*	PE-to-PE	100%	100%	100%	N/A
	Satellite Gateway**	End-to-End	99.5%	N/A	N/A	99.5%
	Private Wireless Gateway	PE-to-PE	100%	100%	N/A	N/A
Time To Repair (TTR)	SCI*	PE-to-PE	4 Hours	4 Hours	4 Hours	N/A
	Satellite Gateway**	PE-to-PE	4 Hours	N/A	N/A	4 Hours
	Private Wireless Gateway	PE-to-PE	4 Hours	4 Hours	N/A	N/A

* Private IP Secure Cloud Interconnection
** The Satellite Gateway SLA is based on Verizon's standard CPE recommendations designed to support the specified customer service parameters. The Satellite Gateway SLA for Availability is measured between Verizon's origination (Satellite earth station Hub) and Customer's destination demarcation point, as measured by Verizon.

The PIP SLA Performance Measures and exclusions are defined in detail below.

4. **Coverage Categories.** Service Level Standards vary by Class of service, Access type, Outage type and Geographic location. These Service Level Standards are defined below.

    4.1   **Class of Service.** The PIP SLA class of service delivery methodology and traffic priority Class of Service are identified as follows:

Private IP Layer 3 Queue	Private IP Layer 2 Queue	Naming
EF *	COS5 *	Real Time / Voice
AF4 AF41, AF42/43	COS4	Video / Priority Data
AF3 AF31, AF32/33	COS3	Mission Critical Data
AF2 AF21, AF 22/23	COS2	Transactional Data
AF1 AF11, AF12/13	COS1	General Data
BE	COS0	General Business - Default

        * The EF and COS5 queues are not designed for packets larger than 300 bytes or Bursty Traffic.

    4.2   **Access Types.** The PIP SLA Service Level Standard metrics may be based on the following Access Types as indicated on the Customer's Master Service Order Form.
- Platinum
- Gold
- Silver
- Bronze

    4.3   **Outage Type.** The PIP SLA defines Service disruptions as:
- Hard Outage
- Service Issue

        4.3.1   The Service restoration priority determines the ranking of the repair actions against other Service Issues.

Priority Level	Criteria
Priority 1	Total loss of Service or degraded Service to the extent that it is unusable by Customer and Customer is prepared to release its Service for immediate testing
Priority 2	Degraded Service, however, Customer is able to use the Service and is not prepared to release its Service for immediate testing
Priority 3	A problem with the Service that does not impact the functionality of the Service; including a single non-circuit specific quality of Service inquiry.
Priority 4	Non Service affecting requests (e.g. a Customer request for an incident report) and all other queries not covered by Priority 1 – 3 above. Scheduled maintenance

        4.3.2   A Hard Outage has Priority 1 Service restoration priority with the exception of Bronze Hard outages which are handled as a Priority 2 ticket. Availability and TTR apply to Hard Outages.

        4.3.3   A Service Issue has Priority 2 Service restoration priority. PTD, PDR and Jitter apply to Service Issues.

        4.3.4   Priority 3 and Priority 4 issues will be addressed by Verizon. However, Priority 3 and Priority 4 issues are not eligible for SLA credits.

    4.4   **Geographical Location.** The PIP SLA covers Service in all countries where PIP Service is offered, except as specified in the exclusions and limitations stated below. The PIP SLA is divided into geographic regions because Service Levels available from access Providers around the world differ between countries. The location and access method of

a Customer Site will determine the applicable Service Levels. As a result of continuing expansion of the Verizon Private IP Network the listing of the Global Tier countries is dynamic, and changes periodically as new countries are added. At Customer's request Verizon will confirm country status and/or provide a listing of countries that fall into these categories. The countries covered under this SLA are divided into the following categories:

- **U.S.:** Contiguous 48 United States, Hawaii and Alaska.
- **Global Tier A:** Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Italy, Japan, Luxembourg, Netherlands, Norway, Singapore, South Korea, Spain, Sweden, Switzerland, United Kingdom.
- **Global Tier B:** Argentina, Argentina MVIC (via Telmex), Australia, Brazil, Brazil MVIC (via Embratel), Bermuda, Bulgaria, Chile, Chile MVIC (via Telmex), China, China MVIC (via China Unicom, China Telecom, China Mobile or CITIC), Colombia, Colombia MVIC (via Telmex), Costa Rica, Czech Republic, Dominican Republic, Greece, Guam, Hungary, India, Indonesia, Israel, Latvia, Malaysia, Mexico, Mexico MVIC (via TelMex, Axtel or MetroRed), Morocco, New Zealand, Panama, Peru, Peru MVIC (via TelMex), Philippines, Poland, Portugal, Puerto Rico, Romania, Russia, Slovakia, Taiwan, Thailand, Turkey, Ukraine, United Arab Emirates (UAE), and Uruguay.
- **Global Tier C:** Albania, Algeria MVIC (via CMC Networks or Tawasul), Angola MVIC (via CMC Networks or Vodacom), Anguilla, Anguilla MVIC (via C&W), Antigua and Barbuda, Antigua and Barbuda MVIC (via C&W), Argentina MVIC (via Claro), Azerbaijan, Bahamas, Bahamas MVC (via C&W), Bahrain, Bahrain MVIC (via Tawasul), Bangladesh, Barbados, Barbados MVIC (via C&W), Belarus, Belize, Belize MVIC (via C&W), Benin MVIC (via CMC Networks), Bermuda, Bermuda MVIC(via C&W), Bolivia MVIC (via Tigo), Bosnia & Herzegovina, Botswana (via CMC Networks or Vodacom), Bulgaria, Burkina Faso (via CMC Networks), Burundi MVIC (via CMC Networks), British Virgin Island, British Virgin Islands MVIC (via C&W), Cameroon MVIC (via CMC Networks or Vodacom), Cape Verdi MVIC (via CMC Networks), Cayman Islands, Cayman Islands MVIC (via C&W), Central African Republic MVIC (via CMC Networks), China, Colombia MVIC (via C&W or Tigo), Cote d'Ivoire MVIC (via CMC Networks or Vodacom), Congo Democratic Republic MVIC (via CMC Networks), Costa Rica, Costa Rica MVIC (via C&W and Tigo), Croatia, Curacao, Curacao MVIC (via C&W), Djibouti MVIC (via CMC Networks or Vodacom), Dominica, Dominica MVIC (via C&W), Dominican Republic, Dominican Republic MVIC (via C&W), Ecuador, Egypt, Egypt MVIC (via TE Data), El Salvador, El Salvador MVIC (via C&W or Tigo), Estonia, Ethiopia MVIC (via CMC Networks or Vodacom), Gabon MVIC (via CMC Networks or Vodacom), Gambia MVIC (via CMC Networks), Ghana MVIC (via CMC Networks or Vodacom), Greece, Grenada, Grenada MVIC (via C&W), Guatemala, Guatemala MVIC (via C&W or Tigo), Guinea MVIC (via CMC Networks), Guyana, Guyana MVIC (via C&W), Haiti, Haiti MVIC (via C&W), Honduras, Honduras MVIC (via C&W or Tigo), Iceland, India MVIC (via Bharti or Reliance), Iraq MVIC (via Tawasul), Jamaica, Jamaica MVIC (via C&W), Japan MVIC (via Softbank), Jordan, Jordan MVIC (via Tawasul) Kazakhstan, Kenya MVIC (via CMC Networks or Vodacom), Kuwait, Kuwait MVIC (via Tawasul), Latvia, Lebanon, Lebanon MVIC (via Tawasul), Lesotho MVIC (via CMC Networks or Vodacom), Liberia MVIC (via CMC Networks), Lithuania, Macao, Macedonia, Madagascar MVIC (via CMC Networks or Vodacom), Malawi MVIC (via CMC Networks or Vodacom), Mali MVIC (via CMC Networks), Malta, Mauritius MVIC (via CMC Networks or Vodacom), Monaco, Montenegro, Mozambique MVIC (via CMC Networks or Vodacom), Namibia MVIC (via CMC Networks or Vodacom), Nicaragua, Nicaragua MVIC (via Tigo or C&W), Niger MVIC (via CMC Networks), Nigeria MVIC (via CMC Networks or Vodacom), Oman, Oman MVIC (via Tawasul), Pakistan, Panama, Panama MVIC (via C&W or Tigo), Paraguay, Paraguay MVIC (via Tigo), Puerto Rico, Puerto Rico MVIC (via C&W), Qatar, Reunion, Romania, Russia MVIC

(via Beeline), Rwanda MVIC (via CMC Networks), Saudi Arabia, Saudi Arabia MVIC (via STC), Senegal MVIC (via CMC Networks), Serbia, Sierra Leone MVIC (via CMC Networks), Slovakia, Slovenia, South Africa, South Africa MVIC (via CMC Networks or Vodacom), Sri Lanka, St. Kitts and Nevis, St. Kitts and Nevis MVIC (via C&W), Saint Maarten MVIC (via C&W), St. Lucia, St. Lucia MVIC (via C&W) St. Martin, St. Martin MVIC (via C&W), St. Vincent, St. Vincent MVIC (via C&W), Sudan MVIC (via CMC Networks), Suriname, Suriname MVIC (via C&W), Swaziland MVIC (via CMC Networks or Vodacom), Tanzania MVIC (via CMC Networks or Vodacom), Togo MVIC (via CMC Networks), Trinidad and Tobago, Trinidad and Tobago MVIC (via C&W), Tunisia MVIC (via CMC Networks), Turkey, Turkey (Turknet), Turks and Caicos, Turks and Caicos MVIC (via C&W), United Arab Emirates (UAE) MVIC (via Etisalat), Uganda MVIC (via CMC Networks or Vodacom), Uruguay, U.S. Virgin Islands, U.S. Virgin Islands(via C&W), Venezuela, Vietnam, Yemen MVIC (via Tawasul), Zambia MVIC (via CMC Networks or Vodacom), Zimbabwe MVIC (via CMC Networks or Vodacom).

Service in the countries without a MVIC designation listed above is provided via a backhaul to the nearest Verizon Provider Edge device. The PTD, PDR, and Jitter Service Level Standards for these locations are based on measurements at Verizon's Provider Edge device. Additional information on the locations of the Verizon Provider Edge is available through Customer's account team or on the Verizon Looking Glass portal for Private IP.

5. **Service Level Standards Defined.**
    5.1 **Availability.**
        5.1.1 **Definition.** End-to-end Circuit up-time.
        5.1.2 **Standard.** See Service Level Standard for Performance Measurements above. Availability includes the local access from the Customer Edge (CE) to the Verizon PIP Provider Edge (PE) and the PIP Network. Availability excludes CPLL and the Customer CPE.
        5.1.3 **Calculation.** Availability is determined by computing the total number of Eligible Hard Outage Minutes per Priority 1 trouble tickets in a calendar month for a specific Customer Circuit divided by the total number of minutes based on a 30-day calendar month. Availability is calculated after a trouble ticket is opened with Verizon and represents the percentage of time that the Circuit is available within a given calendar month.

$$\text{Availability (\%)} = \left(1 - \left(\frac{\text{Total Eligible Hard Outage Minutes per Circuit per month}}{30 \text{ days} * 24 \text{ hours/day} * 60 \text{ minutes/hour}} \right) \right) \times 100$$

        5.1.4 **Credit Structure.** The credit is based on the number of Eligible Hard Outage Minutes. Availability applies only in those cases in which a PIP trouble ticket is opened with Verizon and the Customer subsequently allows the necessary physical or logical access to its premises and facilities for testing if required by Verizon.

Availability credit table:

Availability				Credits as a percent of MRC					
PIP Network Down Time		% of Up Time		All Global Tiers and US	U.S. and Global Tier A	Global Tier B	Global Tier C	U.S. and Global Tier A	U.S.and Global Tier A & B
From (Mins)	To (Mins)	From %	To %	(Platinum)	(Gold, Silver or Bronze)	(Gold, Silver or Bronze)	(Gold, Silver or Bronze)	Satellite	SCI and Private Wireless Gateway
1	43	< 100%	≥ 99.9%	5%	NA	NA	NA	NA	5%
44	86	< 99.9%	≥ 99.8%	10%	10%	5%	NA	NA	10%
87	216	< 99.8%	≥ 99.5%	15%	10%	5%	NA	NA	15%

Availability				Credits as a percent of MRC					
PIP Network Down Time		% of Up Time		All Global Tiers and US	U.S. and Global Tier A	Global Tier B	Global Tier C	U.S. and Global Tier A	U.S.and Global Tier A & B
From (Mins)	To (Mins)	From %	To %	(Platinum)	(Gold, Silver or Bronze)	(Gold, Silver or Bronze)	(Gold, Silver or Bronze)	Satellite	SCI and Private Wireless Gateway
217	432	< 99.5%	≥ 99.0%	25%	15%	10%	5%	5%	25%
433	648	< 99.0%	≥ 98.5%	30%	15%	10%	10%	10%	30%
649	864	< 98.5%	≥ 98.0%	40%	20%	10%	10%	10%	40%
> 864		< 98.0%		50%	20%	10%	10%	10%	50%

5.1.5 **Exclusions.** In addition to the General Exclusions, as set out in the General Exclusion Section below, Availability Service Level Standard measurements do not include the following:

- Any act or omission on the part of any third party other than a local access provider over which Verizon exercises control.
- Periods of Service degradation, such as slow data transmission, where a Priority 1 trouble ticket has not been opened with Verizon and Customer has not released its Service for immediate testing.
- Customer inquiry for circuit monitoring purposes only.
- Availability Service Level Standards for MVIC services are only applicable for MVIC locations where local access is provided by one of the corresponding MVIC partners identified above.
- Off-Net Bronze hard outage to be handled as a Priority 2 ticket.

5.2 Time To Repair (TTR).

5.2.1 **Definition.** Time taken to restore end-to-end Services during a Hard Outage on a specific Circuit.

5.2.2 **Standard.** See Service Level Standard Performance Measurements table above. TTR includes the Local Access from the Customer Edge (CE) to the Verizon PIP Provider Edge (PE) and the PIP Network. TTR excludes CPLL and the Customer CPE.

5.2.3 **Calculation.** TTR is determined by computing the time taken to repair each Eligible Hard Outage Priority 1 trouble ticket in a calendar month for a specific Customer Circuit with the exception of Hard Outages for Bronze which is handled as a Priority 2 ticket. The duration of each Hard Outage on a specific Circuit is calculated after a trouble ticket is opened with Verizon. TTR (Hrs)
= Time taken to repair a specific Circuit experiencing an Eligible Hard Outage Priority 1 trouble. Bronze hard outage to be handled as a Priority 2 ticket.

5.2.4 **Credit Structure.** The credit is based on the number of Eligible Hard Outage Minutes. TTR applies only in those cases in which a PIP Hard Outage Priority 1 trouble ticket is opened with Verizon and the Customer subsequently allows the necessary physical or logical access to its premises and facilities for testing if required by Verizon and with the exception of Hard Outages for Bronze, which are handled as a Priority 2 ticket. Circuits may qualify for the TTR Service Level Standard in addition to the Availability Service Level Standard.

TTR credit table:

TTR	Credit as a Percent of MRC						
PIP Network Outage Time	U.S.	Global Tiers A & B	U.S.	Global Tier A	Global Tier B	Global Tiers C	U.S. and Global Tier A & B
From Hr:Min:Sec / To Hr:Min:Sec	(Platinum)	(Platinum)	(Gold, Silver or Bronze)	(Gold, Silver or Bronze)	(Gold, Silver or Bronze)	(Gold, Silver or Bronze)	SCI, Satellite and Private Wireless Gateway
2:00:00 — 3:59:59	4%	NA	NA	NA	NA	NA	N/A
4:00:00 — 4:59:59	4%	4%	2%	NA	NA	NA	4%
5:00:00 — 7:59:59	10%	10%	4%	4%	NA	NA	10%
8:00:00 — 11:59:59	10%	10%	4%	4%	4%	4%	10%
≥ 12:00:00	10%	10%	4%	4%	4%	4%	10%

5.2.5 **Exclusions.** In addition to the General Exclusions, as set out in the General Exclusion Section below, TTR Service Level Standard measurements do not include the following:

- Any act or omission on the part of any third party, other than a Local Access provider over which Verizon exercises control.
- Periods of Service degradation, such as slow data transmission, where a Priority 1 trouble ticket has not been opened with Verizon and Customer has not released its Service for immediate testing.
- Customer inquiry for circuit monitoring purposes only.
- TTR Service Level Standards for MVIC services are only applicable for MVIC locations where Local Access is provided by one of the corresponding MVIC partners identified above.
- Bronze hard outage to be handled as a Priority 2 ticket.

5.3 Core Network Transit Delay (C-NTD).

5.3.1 **Definition.** Core Network round trip delay average between Verizon-designated core backbone network nodes across a specific region.

5.3.2 **Standard.** See Service Level Standard Performance Measurements table above.

5.3.3 **Calculation.** Verizon calculates the C-NTD by using 64-byte packets for measuring round trip transit delay in milliseconds between Verizon-designated backbone network nodes across a specific region and averaging the results over a 30 day period. The measurements exclude any traffic that is re-routed as a result of a network outage or scheduled maintenance. The monthly measurements are available at the following link: https://enterprise.verizon.com/terms/latency/#pip

5.3.4 **Credit Structure.** To receive a credit, Customer must submit their request within 30 business days after the month in which the C-NTD Service Level Standard was not met. Such credit will equal the pro-rated charges for one day of the MRC for the Customer's Connections within the specific region during the calendar month in which the C-NTD Service Level Standard was not met.

C-NTD credit table:

For Standard not met	Credit
Core Network Transit Delay (C-NTD)	The pro-rated charges equal to one day's MRC for the Customer's Connections

5.3.5 **Exclusions.** In addition to the General Exclusions, as set out in the General Exclusion Section below, C-NTD Service Level Standard measurements do not include the following:

- All Customer data traffic that is marked EF/COS5 by Customer and is not

compliant with the subscribed EF/COS5 Real Time CAR or any other data traffic that is not compliant with the applicable subscribed CAR.
- All Customer data traffic that is marked by Customer using IP Precedence/DSCP settings not supported by the Verizon PIP Network.
- Core Network Transit Delay (C-NTD) is only applicable to the US P-Core Network

5.4   Packet Transit Delay (PTD).

5.4.1   **Definition.** Round trip data packets delay between origination and destination Ports.

5.4.2   Standard.
- PE PTD is the provider edge PE-to-PE monthly average round trip transit delay in milliseconds between respective Provider Edge device pairs on the Verizon PIP Network.
- The PE PTD Service Level Standards is applicable for the following traffic priority classes:
  - Standard PIP Service
  - Enhanced Traffic Management (ETM) option
- PE PTD Service Level Standard Performance Measurements for international and U.S. locations are stated in the PIP PTD Matrix located in the Verizon Secure Guide portal at: http://www.verizonenterprise.com/us/publications/service_guide/secure/cp_pip_sla_matri x_SG.xls.

5.4.3   **Calculation.** PTD is determined by using 64-byte packets for measuring transit delay in milliseconds across the Verizon PIP Network and averaging the results over a thirty day period.

- PTD calculation is as follows: PTD = T2 – T1. Where: T1 is the time in milliseconds when an IP packet leaves the ingress reference point (i.e., Packet exit event) and T2 is the time in milliseconds when an IP packet arrives back at the ingress reference point (i.e. Packet return event)
- PE PTD is measured between the respective origination and destination infrastructure ports, i.e. between the points where the packet enters and exits Verizon's PIP Network, regardless of the mode of access to Verizon's PIP Network. External factors, including, but not limited to, Local Access issues, are excluded from the measurement.

5.4.4   **Credit Structure.** If the PTD Service Level Standard is not met, it is a Service Issue and is considered a Service Restoration Priority 2. If the PTD metric for a pair of Customer Connections or Customer Sites is not being met, Customer may be eligible for a credit. To obtain a credit, a trouble ticket must be opened with Verizon when a PTD Service Level Standard is not being met or if a Service Issue is identified. Verizon will work with Customer to confirm that a PTD issue exists and repair the problem(s), as applicable. Once Verizon confirms that the PTD Service Level Standard is not being met, Verizon will have 30 calendar days to repair the Service to meet the PTD Service Level Standard and close the applicable trouble ticket, and in such an event, Customer will not be eligible for a credit. If, after 30 calendar days of opening the trouble ticket, the PTD Service Level Standard continues to not be met, Customer will qualify for a credit. Customer's measurement of PTD prior to opening a trouble ticket may be considered by Verizon in determining the need to repair the Service.

PTD credit table:

For Standard not met	Credit as % of MRC
Packet Transit Delay (PTD)	20%

5.4.4.1 Service Issues occur between pair Ports of the Private IP Network. Consequently, two Customer connections will be impacted by each Service Issue. For Service Issue Service Level Standard credit purposes, the MRC will be defined as the average of the MRCs for each of the two impacted Customer Connections.

5.4.5   **Exclusions.** In addition to the General Exclusions, as set out in the General

Exclusion Section below, PTD Service Level Standard measurements do not include the following:

- All Customer data traffic that is marked EF/COS5 by Customer and is not compliant with the subscribed EF/COS5 Real Time CAR or any other data traffic that is not compliant with the applicable subscribed CAR.
- All Customer data traffic that is marked by Customer using IP Precedence/DSCP settings not supported by the Verizon PIP Network.
- PTD Service Level Standards for MVIC locations are based on measurements at the Verizon owned Provider Edge devices and not the MVIC partner location.
- Any delay or dropped data packets caused by a Customer who subscribes to Access Oversubscription and Customer's traffic over a circuit exceeds 100% of the Access speed of the circuit.

5.5 Packet Delivery Ratio (PDR).

5.5.1 **Definition.** Effectiveness in transporting and delivering customer packets across the PIP Network

5.5.2 **Standard.**

- PE PDR is the PE-to-PE monthly average Packet Delivery Ratio. The PE PDR Service Level Standards is applicable for the following traffic priority classes: Standard PIP Service and Enhanced Traffic Management (ETM) option.
- PE PDR Service Level Standard is:
  - For the EF/COS5 traffic priority class: 99.995%
  - For the AF/COS4, COS3, COS2, COS1 traffic priority class: 99.99%
  - For the BE/COS0 traffic priority class: 99.5%

5.5.3 **Calculation.**

- PDR is determined by using 64-byte packets for measuring the number of packets within a specified traffic priority class that are successfully delivered divided by the total number of packets sent within the specified traffic priority class during a calendar month. For data consisting of packets within the specified traffic priority class, the PDR is as follows:

$$\text{PDR (\%)} = \frac{\text{Packets Delivered}}{\text{Packets Offered}} \times 100$$

- PE PDR is measured between the respective origination and destination infrastructure Ports, i.e. between the points where the packet enters and exits Verizon's PIP Network, regardless of the mode of access to Verizon's PIP Network. External factors, including, but not limited to, Local Access issues, are excluded from the measurement.

5.5.4 **Credit Structure.** If the PDR Service Level Standard is not met, it is a Service Issue and is considered Service Restoration Priority 2. If the PDR metric for a pair of Customer Connections or Customer Sites is not being met, Customer may be eligible for a credit. To obtain a credit, a trouble ticket must be opened with Verizon when a PDR Service Level Standard is not being met or if a Service Issue is identified. Verizon will work with Customer to confirm that a PDR issue exists and repair the problem(s), as applicable. Once Verizon confirms that the PDR Service Level Standard is not being met, Verizon will have 30 calendar days to repair the Service to meet the PDR Service Level Standard and close the applicable trouble ticket, and in such an event, Customer will not be eligible for a credit. If, after 30 calendar days of opening the trouble ticket, the PDR Service Level Standard continues to not be met, Customer will qualify for a credit. Customer's measurement of PDR prior to opening a trouble ticket may be considered by Verizon in determining the need to repair the Service.

PDR credit table:

For Standard not met	Credit as % of MRC
Packet Delivery Ratio (PDR)	20%

5.5.4.1 Service Issues occur between pair Ports of the Private IP Network, including SCI. Consequently, two Customer connections will be impacted by each Service Issue. For Service Issue Service Level Standard credit purposes, the MRC will be defined as the average of the MRCs for each of the two impacted Customer Connections.

5.5.5 **Exclusions.** In addition to the General Exclusions, as set out in the General Exclusion Section below, PDR Service Level Standard measurements do not include any of the following:

- Packets that are not delivered due in whole or in part to factors unrelated to Verizon's PIP/PIPL2 Network.
- Packets dropped at infrastructure ingress or egress due to improper Customer Port speed specifications of Customer Port speeds.
- All Customer data traffic that is marked EF/COS5 by Customer and is not compliant with the subscribed EF/COS5 Real Time CAR or any other data traffic that is not compliant with the applicable subscribed CAR.
- All Customer data traffic that is marked by Customer using IP Precedence/DSCP settings not supported by the Verizon PIP Network.
- PDR Service Level Standards for MVIC locations are based on measurements at the Verizon owned Provider Edge devices and not the MVIC partner location.
- Any delay or dropped data packets caused by a Customer who subscribes to Access Oversubscription and Customer's traffic over a circuit exceeds 100% of the Access speed of the circuit.

5.6 Jitter.

5.6.1 **Definition.** Displacement of data packets from their ideal sequence or position in time.

5.6.2 Standard.

- PE Jitter is the monthly average mean deviation of the difference in packet arrival time at the receiver compared to the sender for a pair of packets one-way between respective Provider Edge Devices. The Jitter Service Level Standards is applicable for the following traffic priority classes:
- Enhanced Traffic Management (ETM) option:
  - PE Jitter is applicable to data packets marked EF by Customer and compliant with the subscribed EF Real Time CAR.
  - PE Jitter is applicable to data packets in the AF4 traffic class and compliant with the AF4 forwarding priority.
  - Other traffic classes are not available for PE Jitter Service Level Standards.
- PE Jitter Service Level Standard provides that the maximum delay variance between Verizon Private IP PE devices is less than 5 ms one-way for the EF traffic class and less than 15 ms one-way for the AF4 traffic class.
- If a Jitter issue is identified, packet fragmentation technologies or similar capability may be required to remedy the issue.

5.6.3 Calculation.

- Jitter is determined by using 64-byte packets for measuring the mean deviation of the difference in packet spacing at the receiver compared to the sender for a pair of packets. The mean is determined by sampling the PIP Network frequently and averaging the results over a thirty day period. The calculation for Jitter (J_i) for two consecutive packets i and $i+1$ is as follows: Jitter $(J_i) = \Delta T_i - \Delta T_i'$
  Where:
  T_i = time 1st byte of packet i is received by the source Port (ingress time)
  T_{i+1} = time 1st byte of packet $i+1$ is received by the source Port (ingress time) T_i' = time 1st byte of packet i is received at the destination Port (egress time)
  T_{i+1}' = time 1st byte of packet $i+1$ is received at the destination

Port (egress time) And:

$\Delta Ti = Ti+1 - Ti$ (ΔTi is the time interval between packets at ingress)

$\Delta Ti' = Ti+1' - Ti'$ ($\Delta Ti'$ is the time interval between packets at egress) The Average Jitter (J-avg) is calculated as follows:

Average Jitter (J-avg) = $\sum |Ji| / (N-1)$

Where:

N is the number of sample packets over 30 day period

- PE Jitter is measured between the respective origination and destination infrastructure Ports, i.e. between the points where the packet enters and exits Verizon's PIP Network, regardless of the mode of access to Verizon's PIP Network. External factors, including, but not limited to, Local Access issues, are excluded from the measurement.

5.6.4 **Credit Structure.** If the Jitter Service Level Standard is not met it is a Service Issue and is considered Service Restoration Priority 2. If the Jitter metric for a pair of Customer Connections or Customer Sites is not being met, Customer may be eligible for a credit. To obtain a credit, a trouble ticket must be opened with Verizon when a Jitter Service Level Standard is not being met or if a Service Issue is identified. Verizon will work with Customer to confirm that a Jitter issue exists and repair the problem(s), as applicable. Once Verizon confirms that the Jitter Service Level Standard is not being met, Verizon will have 30 calendar days to repair the Service to meet the Jitter Service Level Standard and close the applicable trouble ticket, and in such an event, Customer will not be eligible for a credit. If, after 30 calendar days of opening the trouble ticket, the Jitter Service Level Standard continues to not be met, Customer will qualify for a credit. Customer's measurement of Jitter prior to opening a trouble ticket may be considered by Verizon in determining the need to repair the Service.

Jitter credit table:

For Standard not met	Credit as % of MRC
Jitter	20%

5.6.4.1 Service Issues occur between pair Ports of the Private IP Network. Consequently, two Customer connections will be impacted by each Service Issue. For Service Issue Service Level Standard credit purposes, the MRC will be defined as the average of the MRCs for each of the two impacted Customer Connections.

5.6.5 **Exclusions.** In addition to the General Exclusions, as set out in the General Exclusion Section below, Jitter Service Level Standard measurements do not include any of the following:

- PE Jitter applicable to the AF4 traffic class is available only for Video traffic that uses either AF41 or CS4 classification when the AF4 queue facilitating such Video traffic is not mixed with any other type of traffic.
- All Customer data traffic that is marked EF by Customer and is not compliant with the subscribed EF Real Time CAR or any other data traffic that is not compliant with the applicable subscribed CAR.
- All Customer data traffic that is marked by Customer using IP Precedence/DSCP settings not supported by the Verizon Private IP Network.
- Jitter Service Level Standards for MVIC locations are based on measurements at the Verizon owned Provider Edge devices and not the MVIC partner location.
- Jitter Service Level Standard is not applicable to Private IP Layer 2 services

5.7 Service Installation.

5.7.1 **Definition.** Period of time beginning on the Order Acceptance date and ending on the date Verizon completes installation of the Service and the Service is up

and billable. Customer's Due Date is defined as the date to which Verizon commits to deliver the Service.

5.7.2   **Standard.** See Service Level Standard Performance Measurements table above.

5.7.3   **Calculation.** The Service Installation Service Level Standard is calculated by computing the period of time beginning on the Order Acceptance date and ending on the date Verizon completes installation of the Service and the Service is up and billable.

5.7.4   **Credit Structure.** To obtain a credit, Customer must report the delay in Service installation to the Verizon account team as described in the in the Credit Section of the SLA.

Service Installation credit table:

For Standard not met	U.S.	Global Tier A	Global Tier B	Global Tier C
Service Installation	50% of the first month's MRC on the applicable Connection	50% of the first month's MRC on the applicable Connection	50% of the first month's MRC on the applicable Connection	50% of the first month's MRC on the applicable Connection

5.7.5   **Exclusions.** In addition to the General Exclusions, as set out in the General Exclusion Section below, the Service Installation Service Level Standard does not include any minutes associated with the following:

- Delays in installation related to Customer actions, moves or scheduling difficulties.
- Delays resulting from changes to a previously accepted order for Service from Customer, its agents or vendors.
- Any delays resulting from unavailability of Customer's premises, equipment, or facilities required to install the Service.
- Delays attributed to extending the Local Access demarcation point.
- Delays resulting from inaccurate or incorrect order information from Customer.
- Delays resulting from an order suspension due to credit issues involving Customer. Any periods of delay attributable to the reasons above will be deducted from the Service Installation time period.

5.8   Moves, Adds or Changes (MAC).

5.8.1   **Definition.** The MAC interval is the period of time beginning on the Order Acceptance date and ending on the date Verizon completes the Order for the Service. Customer's Due Date is defined as the date to which Verizon commits to deliver the Service.

5.8.2   **Standard.** See Service Level Standard Performance Measurements table above.

5.8.3   **Calculation.** The MAC Service Level Standard is calculated by computing the period of time beginning on the Order Acceptance date and ending on the date Verizon completes the order for the Service.

5.8.4   **Credit Structure.** To obtain a credit, Customer must report the delay in Service order completion to the Verizon account team as described in the Credit Section of the SLA.

MAC credit table:

For Standard not met	U.S.	Global Tier A	Global Tier B	Global Tier C
MAC	50% of MRC on the applicable Connection	50% of MRC on the applicable Connection	50% of MRC on the applicable Connection	50% of MRC on the applicable Connection

5.8.5   **Exclusions.** In addition to the General Exclusions, as set out in the General Exclusion Section below, the MAC Service Level Standard does not include any minutes associated with the following:

- Delays in installation related to Customer actions, moves or scheduling difficulties.
- Delays resulting from changes to a previously accepted order for Service from Customer, its agents or vendors.
- Any delays resulting from unavailability of Customer's premises,

equipment, or facilities required to install the Service.

- Delays attributed to extending the Local Access demarcation point.
- Delays resulting from inaccurate or incorrect order information from Customer.
- Delays resulting from an order suspension due to credit issues involving Customer.
- MAC problems for services provided pursuant to any promotional Move, Add or Change offerings might not be eligible for credit refunds.

Any periods of delay attributable to the reasons above will be deducted from the MAC installation time period.

5.9   Mean Opinion Score (MOS).

5.9.1   **Definition.** Quality level of the audio fidelity and clarity of a voice call.

5.9.2   **Standard.** See Service Level Standard Performance Measurements table above.

5.9.3   **Calculation.** Verizon calculates MOS by sampling performance scores for the EF traffic class, using the standards based ITU-T G.107 (E-model) and assuming a G.711 codec, between Verizon-designated core backbone network nodes and averaging the results over a thirty day period. The monthly measurements are available at the following link: https://enterprise.verizon.com/terms/latency/#pip

5.9.4   Credit Structure. To receive a credit, Customer must submit their request within 30 business days after the month in which the MOS Service Level Standard was not met. Such credit will equal the pro-rated charges for one day of the MRC for the Customer's Connections within the specific region during the calendar month in which the MOS Service Level Standard was not met.

MOS credit table:

For Standard not met	Credit
Mean Opinion Score (MOS)	The pro-rated charges equal to one day's MRC for the Customer's Connections

5.9.5   **Exclusions.** In addition to the General Exclusions, as set out in the General Exclusion Section below, MOS Service Level Standard measurements do not include the following:

- The MOS Service Level Standard applies only to data packets marked EF by Customer and compliant with the Customer's subscribed EF Real Time CAR.
- The MOS Service Level Standard applies only to the U.S., EMEA and APAC regions.
- The MOS Service Level Standard is not applicable to the Private IP Layer 2 services

6.   Credit Requests and Application Process.

6.1   Service Level Agreement Credit Application Structure.

- For any calendar month in which Verizon fails to meet any of the Service Level Standards stated in this document the credit structure for the Service Level Standards listed above will be applied to the corresponding net billing MRC for the specific Connection(s) affected by a PIP Network Hard Outage(s) or Service Issue(s).
- The total of all credits within any one month is limited to a maximum of 100% of the MRC for the specific Connection or Site, as applicable, which was impacted by any non-compliance with the Service Level Standard(s). Credits are not cumulative month to month.
- Credits for Hard Outages are determined based on Eligible Hard Outage Minutes and Customer may claim the TTR Service Level Standard credit in addition to the Availability Service Level Standard credit in a given calendar month. Customer may claim only one credit within a particular Service Issue Service Level Standard category during a given month. Customer cannot claim credits from both the Hard Outage and Service Issue categories for the same event. Customer can request to

have compliance checked for all of the standard Service Level Standard commitments when requesting credits in any given month.

- To receive a credit, a trouble ticket must be opened with Verizon and Customer must submit their credit request no later than the stipulated time allowed to claim the specific Service Level Standard credit. The appropriate refund amount will be credited to the Customer's account at the billing account number (BAN) level in one lump sum, as opposed to each individual circuit or all circuits under multiple BANs. The appropriate refund amount will be appearing as a line item on a bill delivered within 90 calendar days following Verizon's confirmation of non-compliance with the Service Level Standard.
- Credits do not apply to Local Access or backhaul charges.

6.2   **Process for Customer to Apply for Service Level Agreement Credits.** The process to apply for SLA credits is provided below for each of the Service Level Standards.

6.2.1   **Opening a Trouble Ticket.** In the case that a trouble ticket is required to document an outage or service event for credit compliance, this can be done either through the Customer Service Center or through the web-based Verizon Enterprise Center. The number for the assigned Customer Service Center is printed on Customer's invoice. Access to the Verizon Enterprise Center can be requested at the first use by registering at the Verizon Enterprise Center portal https://enterprisecenter.verizon.com/

6.2.2   **Submitting a Service Level Agreement Credit Request.** The request for an SLA credit is submitted in writing from Customer to the account team. The timing and content of the request varies by Service Level Standard. This communication can be through email or by fax.

6.2.3   Trouble Ticket and Credit Request by Service Level Agreement.

6.2.3.1   **Availability and Time To Repair (TTR).** In order for the Hard Outage to qualify for an SLA credit Customer must do the following:

6.2.3.1.1   A trouble ticket is opened with Verizon within 72 hours of the time the Hard Outage.

6.2.3.1.2   Submit an SLA credit request to Verizon within 30 days of the closing of the trouble ticket. The request may be submitted in writing to Customer's account team or via the Verizon Enterprise Center portal. The credit request must contain the following information:
- The date the Hard Outage occurred.
- The time the Hard Outage began and ended.
- The circuit ID(s) for each circuit(s) that was impacted.

6.2.3.2   **Packet Transit Delay (PTD), Packet Delivery Ratio (PDR) and Jitter.** In order for the Service Issue to qualify for an SLA credit Customer must do the following:
- A trouble ticket is opened with Verizon within 72 hours of the time the Service Issue arose.
- Submit an SLA credit request to Verizon within 30 days of the closing of the trouble ticket. The request may be submitted in writing to Customer's account team or via the Verizon Enterprise Center portal. The credit request must contain the following information:
  - The date the Service Issue occurred.
  - The time the Service Issue began and ended.
  - The circuit ID(s) for each circuit(s) that was impacted.

6.2.3.3   **Core Network Transit Delay (C-NTD) and Mean Opinion Score (MOS).** To receive a credit, Customer must make a credit request in writing (e-mail or fax) to the Verizon account team within 30 business days after the month in which the C-NTD or MOS Service Level Standard was not met.

6.2.3.4 **Service Installation and Moves, Adds, or Changes (MAC).** Customer must report the delay in Service installation or MAC to the appropriate Customer Service Center when the target date is missed. Customer must make a credit request in writing (e- mail or fax) to Verizon account team within 30 days of the date that Verizon completes the installation of the circuit. Customer must document the following information when requesting the credit:

- The date on which the Service Installation Period or MAC interval began.
- The date specified for Service Installation or Service order completion in the Customer's order.
- The date installation or Service order was completed.
- The Port and Local Access ID numbers for the installed Service or the related Service order.

6.3 **Service Level Agreement Credit Time Limitation.** Service Credits made by Verizon to Customer under this Service Level Agreement are the sole and exclusive remedy available to Customer in respect of any failure to meet a Service Level Standard. Notwithstanding the preceding sentence, Customer may pursue the following options after three consecutive months of non-compliance with the PIP Service SLA:

6.3.1 Customer may elect to continue the Service for the affected connection inclusive of the credit. Customer can only receive a maximum of six months of credits for any individual Service Level Standard within a 12-month period regardless of the number of Connections.

6.3.2 Customer may elect to discontinue all PIP Service for an affected Connection without liability except for charges incurred prior to discontinuation of the Service. To cancel the Service for a Connection, Customer must submit a written disconnect notice to its Verizon account team within 30 days following the end of either the third or subsequent consecutive month of Verizon's failure to meet the Service Level Standard.

7. **General Exclusions.** The following exclusions apply to all Service Level Standards contained in this document:

7.1 Service Level Standards is limited to measurements taken at and service events occurring at or within the Provider Edge for Private IP services delivered when using the following access methods to Private IP:

- Network to network interface (NNI) partner via a MVIC
- Satellite Port
- Wireless
- Customer Provided Access
- International Private Line (IPL)
- SCI

7.2 No Service Level Standards are provided for the following, nor will any Service level standard not met be considered for:

- Service installations prior to acceptances by Customer.
- Packets marked EF/COS5 by Customers that are larger than 300 bytes.
- Bursty Traffic in the EF/COS5 queue.

7.3 Private IP Layer 2 Specific Exclusions:

- Private IP Layer 2 excludes Mean Opinion Score (MOS) and Jitter Service Level Standards.
- Private IP Layer 2 Coverage Exclusions:
  o All MVIC locations.
  o The following countries: Argentina, Brazil, Canada, Chile, Colombia, Mexico, Panama, Peru, Puerto Rico and Venezuela.

7.4 Service Level Standard measurements do not include periods of PIP Network Outage resulting in whole or in part from one or more of the following causes:

- Any Hard Outage minutes associated with failure of CPLL.

- CPE associated with the PIP Service.
- Any act or omission on the part of the Customer, its contractors or vendors, or any other entity over which the Customer exercises control or has the right to exercise control.
- Any scheduled maintenance on the part of Customer, Customer contractors or Customer vendors.
- Any scheduled maintenance on the part of Verizon or Verizon Service partners which are within Verizon's maintenance windows.
- Any scheduled maintenance on the part of Verizon's Service partners, including without limitations, MVICs.
- Any Force Majeure events as defined in the Contract.

8. Terms and Definitions.

Terms and Definitions	Definition
Assured Forwarding (AF)	A set of priority Class of Service types intended to support data prioritization and precedence
Best Effort (BE)	A Class of Service type intended to support General Business transactions
Billing Account Number (BAN)	The account number to which all the Service charges are linked.
Bursty Traffic	Traffic where the minimum packet arrival gap in ms is the same or less than [(the largest expected voice packet sizes in bytes)*8000/(link speed in bits/sec)]
CE-to-HUB	Satellite Gateway SLA is measured between Verizon's-origination (Satellite earth station Hub) and customer-destination demarcation point.
Circuit	A circuit is a Connection, port, CAR and local access.
Class of Service (COS)	Priority classes that enable the network to differentiate data packages and assign routing precedence based on the customer data networking settings
Committed Access Rate (CAR)	Committed Access Rate (CAR) is the amount of bandwidth to which Customer subscribes on a logical port by logical port basis. CAR can be equal to or less than the logical port speed.
Connection	Connection is a port on Customer's virtual private network (VPN) connected to the Verizon PIP Network. Customer subscribes to a CAR for each Connection.
Core Network	The Core Network, also referred as the Provider Core or P-Core Network, is a dedicated and redundant backbone network with a resilient topology engineered to optimized network routes, maximize stability and minimize failover times. The Core Network has been designed to provide quality of service excellence and to enable intelligent adaptability to new generation technologies. The Core Network is a secure, reliable and fast backbone network platform dedicated solely to Private MPLS network traffic. The Core Network supports Private MPLS network traffic but does not support direct customer access connections.
CPE	Customer Premise Equipment. Telecommunications equipment located at the Customer Site.
Customer Edge (CE)	Routers and CPE connected to the local access loop.
CE-to-CE	Customer Edge to Customer Edge. The network segment to and from the customer demarcation point that includes the local loop and the PIP network but excludes the customer CPE.
Customer Provided Local Loop (CPLL)	Customer remits payment for local access directly to their local access provider and Verizon does not invoice Customer for local access charges.
Customer Service Center	Verizon locations where Customer reports Service issues.
Eligible Hard Outage Minutes	Total number of Connection Hard Outage minutes less any Outage minutes attributed to events excluded by the PIP SLA

Terms and Definitions	Definition
End-to-End	The network segment in which Verizon Business has control. It includes the Local Loops if it is furnished or ordered by Verizon Business or a Verizon Affiliate from a third party carrier, and where Verizon Business invoices the Local Access cost to Customer. It excludes the CPE.
Enhanced Traffic Management Service (ETM)	Service that provides priority traffic routing with Class of Service features
Expedited Forwarding (EF)	A priority Class of Service type intended to support applications that require real time traffic flows
Hard Outage	Complete loss of Service where Customer cannot use the Service and is prepared to release it for immediate testing.
Hub	The satellite infrastructure located at a Verizon earth station which is interconnected to Private IP.
International Private Line(IPL)	Provides dedicated connections (point-to-point or point-to-multipoint circuits) between customer sites in numerous countries around the globe.
IP	Internet Protocol
Layer 2	The Data Link Layer of the OSI Model.
Layer 3	The Network Layer of the OSI Model.
Local Access	On-Net, Off-Net or Customer Provided connection from the Provider Edge to the Customer Edge.
Managed Services	A Verizon Service designed to provide customers with a range of management options, from the proactive monitoring to complete outsourcing, of the Customer's data or voice networks.
MPLS	Multi-Protocol Label Switching. An IETF standard.
MRC	Monthly Recurring Charge. MRC includes net port and CAR charge, less any applicable discounts, and does not include local access charges.
MVIC	Private IP MPLS VPN Interconnect Services provided through a partner network and interconnected with Verizon through the MVIC
Network	Verizon MPLS VPN Service, known as PIP. A network-based IP VPN service that utilizes IP-over-MPLS (Multi-Protocol Label Switching) technology to deliver IP VPN services to its customers in a secure, reliable and fast manner.
Network Outage	A Network Outage is defined as an unscheduled period in which the Service is interrupted and unavailable for use by Customer for 60 or more Unavailable Seconds (UAS). UAS is the American National Standards Institute standard (ANSI) T1.231.
NNI	Network to Network Interface (NNI) which provides an efficient interface between two data networks.
Off-Net	A location that is interconnected to Verizon Business using Local Access Circuits not wholly furnished via facilities owned or operated by Verizon Business or a Verizon Affiliate but ordered by Verizon Business or a Verizon Affiliate from a third party carrier. Off–net is offered at three levels of performance: Premium, Standard and Basic.
On-Net	A location that is interconnected to Verizon Business using Local Access Circuits wholly furnished via facilities owned or operated by Verizon Business or a Verizon Business Affiliate.
Order Acceptance	When Customer has provided all information required by Verizon, Customer has successfully passed a credit check (if required), and Verizon's ordering systems have processed the Customer's information and have accepted the order as ready for provisioning.

Terms and Definitions	Definition
OSI Model	Open Systems Interconnection Reference Model. A standard description for how data should be transmitted between any two points in a telecommunication network. Its main purpose is to define the networking framework for the consistent delivery of products and services over a telecommunications network. The reference model defines seven layers of functions that take place at each end of a telecommunication network: Application (Layer 7), Presentation (Layer 6), Session (Layer 5), Transport (Layer 4), Network (Layer 3), Data-Link (Layer 2) and Physical (Layer 1).
P-Core	Provider Core. Dedicated and redundant backbone network with a resilient topology engineered to optimized network routes, maximize stability and minimize failover times. The P-Core has been designed to provide quality of service excellence and to enable intelligent adaptability to new generation technologies. The P-Core is a secure, reliable and fast backbone network platform dedicated solely to Private MPLS network traffic. The P-Core supports Private MPLS network traffic but does not support direct customer access connections.
PIP	Private IP Service
PIP Network	The Verizon Private IP Network consisting of the devices and transport making up the MPLS cloud.
Port	An entrance to and/or exit from a network.
Provider Edge (PE)	The edge of the Verizon PIP Network. It is the point in which customer traffic enters or exits the Verizon PIP Network.
PE-to-PE	Provider Edge to Provider Edge. The network segment consisting of the PIP Network but excluding the Local Loops and the customer CPE
Private IP Layer 2	Private IP Layer 2 is a technology using Virtual Private Wire Services (VPWS) to provide point-to-point routing and to allow Customers to retain control of routing, architectural and topology changes.
Private IP Layer 3	Private IP Layer 3 is a Network-Based IP VPN service using IP-over-MPLS technology to deliver high-performance IP VPN solutions to customers in a secure, reliable and fast manner.
Service or PIP Service	Service or Private IP Service is defined as Customer port and CAR and Local Accesses.
SLA	Service Level Agreement.
Service Restoration Priorities	Process by which Service disruptions are ranked by the Customer Service Center. A "Priority 1" is a total loss of Service, or degraded Service to the extent that it is unusable by Customer and Customer is prepared to release its Service for immediate testing. A "Priority 2 is degraded Service, however Customer is able to use the Service and is not prepared to release its Service for immediate testing.
Site	A site is Customer's Service location which includes CPE and a Connection.
Service Issue	A degradation of Service where Customer is able to use the Service and is not prepared to release the Service for immediate testing. Service Issues are a Priority 2 restoration priority.
Trouble Ticket	A trouble ticket is defined as the official method used to document a perceived problem with the Service or non-compliance with a Service Level Standard.
Virtual Private Network (VPN)	A virtual network that provides the equivalent of a dedicated private network service over a shared data telecommunications infrastructure. A VPN maintains privacy through security network protocols. A VPN uses a logical connection to route traffic between network sites. One of the key attributes of a VPN is that it can provide the same capabilities of a Private Network but usually at a much lower cost.

Private IP Satellite Access Service Level Agreement Summary

This Service Level Agreement "(SLA") sets key performance metrics for the Private IP Satellite Access Service. This SLA applies only to Private IP Satellite Access Service provided exclusively in the continental United States (CONUS) and only for Customers with the standard Antenna/BUC configurations with the Throughput level indicated in Table 1 below.

Customers may receive credits for failure by Verizon to satisfy the SLA as set forth below.

These metrics include Network Transit Delay, Network Packet Delivery, and Network Availability and range from 99.7% to 99.9% across the CONUS. Service level experienced by any particular customer will vary based on geographic location, antenna size and power, applications deployed on the network and other factors, as shown in Figures 1, 2, and 3. No delay, unavailability or other performance problem resulting from the exclusions set forth in Exclusions in Section 3 of this SLA will be counted in the determination of whether the threshold standard for any particular SLA has been met.

The term SLA is used to refer collectively to all of the SLAs related to the Verizon Private IP Satellite Access Service set forth in this document. Each individual standard and its related remedy are referred to by the name of the standard itself.

1.1 Network Transit Delay

Network Transit Delay is the monthly average delay for round-trip transmission between Verizon- designated origination and the destination demarcation points within the Verizon Satellite Network, as measured by Verizon. The Network Transit Delay standard is set forth in Table 1 below (following Section 1.2).

1.2 Network Packet Delivery

Network Packet Delivery is the percentage of packets delivered (i.e., not dropped) between Verizon- designated Verizon Private IP Satellite demarcation points, as measured by Verizon The Network Packet Delivery standard is set forth in Table 1 below.

Table 1. Network Transit Delay and Network Packet Delivery Based on Required Antenna/BUC Capacity and Throughput

Region	Antenna/BUC Size	Maximum Throughput	Network Transit Delay (round trip) Milliseconds (Less or equal to)	Network Packet Delivery (Greater or equal to)
CONUS	1.2m/3w 1.8m/3w (Florida)	less than 512 Kbps	800	99%
CONUS	1.2m/4w 1.8m/3w (Florida)	less than 1024 Kbps	800	99%

Region	Antenna/BUC Size	Maximum Throughput	Network Transit Delay (round trip) Milliseconds (Less or equal to)	Network Packet Delivery (Greater or equal to)
CONUS	1.8m/4w 2.4m/4w *	less than 2048 Kbps	800	99%

1.3 Network Availability

Availability Network Availability is the total number of hours in a month during which a Customer's Private IP Satellite Access Service, measured between the two demarcation points shown in Appendix A is able to exchange signals between the Satellite Customer site demarcation point (on the right side of the diagram and the Satellite Hub demarcation point, on the left side of the diagram) divided by the total number of hours in a month. For purposes of calculating Network Availability under this Network Availability SLA, the Private IP Satellite Access Service is considered unavailable only from the time that a Trouble Ticket is opened by the Ticket Management group to the time the Ticket is closed, based on the time stamp noted on the Trouble Ticket. Figures 1, 2 and 3 display the applicable Network Availability standards, depending on specified factors, such as geography, transmission speed, Customer's antenna size and block up-converter (BUC).

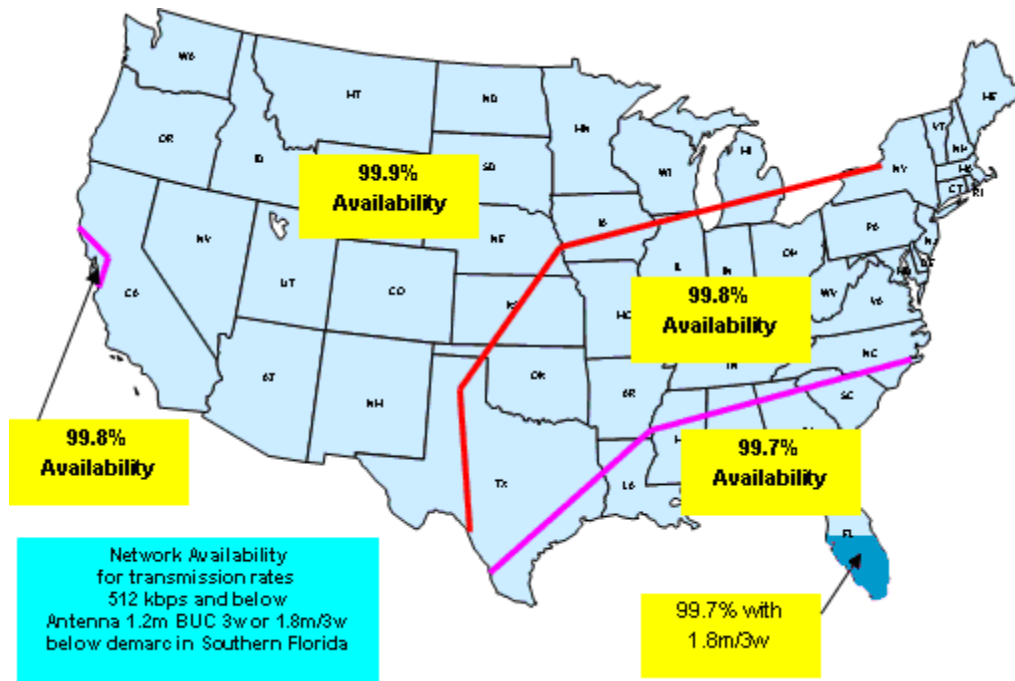**Figure 1**: CONUS Network Availability SLA based on 512 Kbps transmission rate and below.

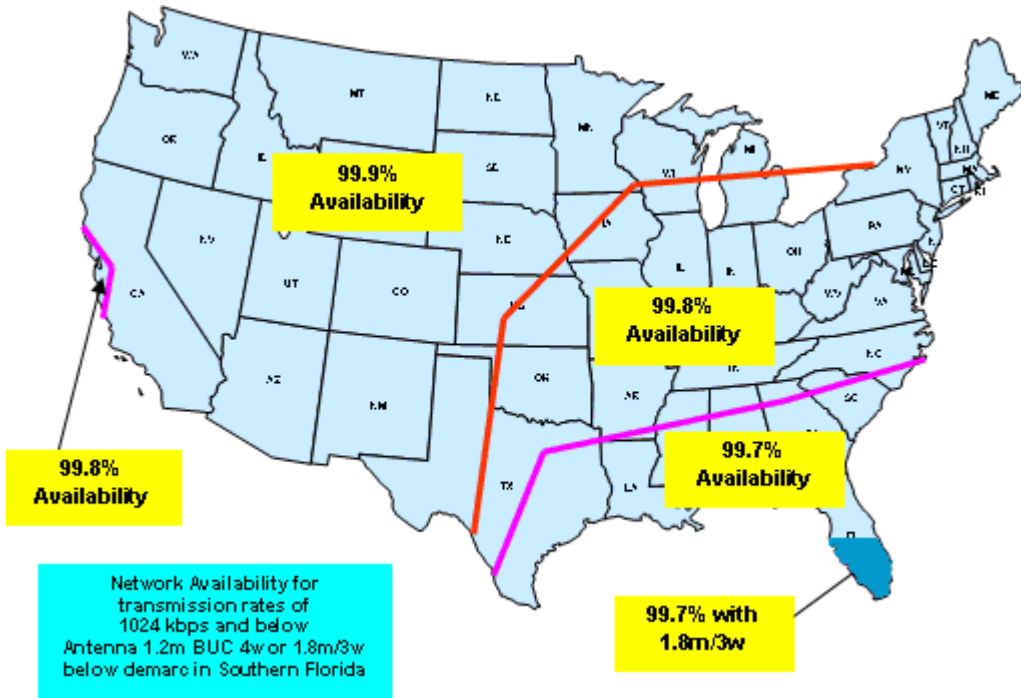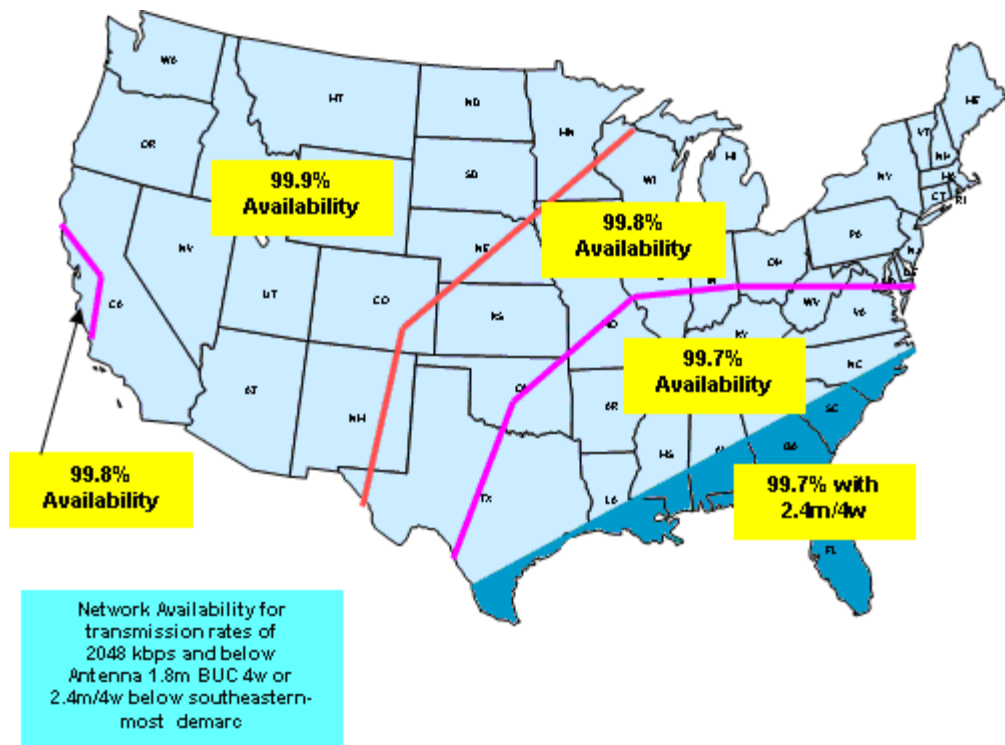**Figure 2**: CONUS Network Availability SLA based on 1024 Kbps transmission rate and below.

Figure 3: CONUS Network Availability SLA based on 2048 Kbps transmission rate and below.

1.4   De-Ice

Customer sites located above the demarcation line are at risk for accumulating snowfall or ice on their equipment which may affect their Private IP Satellite Access Service. Customers should consider installing devices to remove or prevent the buildup of snow or ice on equipment that is used to provide Private IP Satellite Access Service.

Figure 4: De-Ice Locations for Network Availability

2.   Credit Structure

2.1   General

For any billing month in which Verizon fails to meet any SLA in this document, the applicable credit set out in Section 2.2 or Section 2.3 below will be applied to the monthly recurring charges (MRC) set forth in the Agreement for the Customer's Private IP Satellite Access Service, not to exceed the total of those charges for one month.

Credits may not be applied to offset any other charges, including without limitation local access or backhaul charges.

This SLA sets forth Customer's sole remedy with respect to any failure by Verizon to meet the specified standard. The determination as to whether a particular SLA has been met or has not been met is reserved to Verizon in its sole judgment.

Verizon reserves the right to enhance or restrict these SLAs in whole or in part. In the event of a material adverse change in this SLA, Customer may elect to terminate the Verizon Private IP Satellite Access Service within 30 days of the change without penalty, unless Verizon cures the material adverse change within the notice period.

2.2 Network Packet Delivery and Transit Delay SLA Remedy

Verizon posts Network Packet Delivery and Network Transit Delay SLA results by the 10th business day of each month at http://www.verizonbusiness.com/about/network/vsat/. To receive credit under Network Transit Delay SLA or Network Packet Delivery SLA, Customer must request such credit within 30 days from the date that the actual service rates are posted by Verizon by submitting a credit request form online at http://www.verizonbusiness.com/terms/us/products/. For each month in which Verizon fails to meet the Network Packet Delivery SLA or Network Transit Delay SLA, Customer is eligible for a credit equal to 1/30th of the MRC for Customer's Private IP Satellite Access Service.

2.3 Network Availability SLA Remedy

To receive credit under the Network Availability SLA, Customer must submit a Network Availability Credit request form online at http://www.verizonbusiness.com/terms/us/products/ within 30 days from the date that the Network Availability actual results are posted by Verizon. If the Network Availability SLA has not been met, then for each hour or fraction thereof in any calendar month that Network Availability fell below the SLA standard, Customer's account shall be credited at Customer's request for the pro-rated charges for one day of the MRC for Verizon Private IP Satellite Access Service, not to exceed the total of those charges for one month.

3. Exclusions

No delay, unavailability or other performance problem resulting from any of the following will be counted in the determination of whether the threshold standard for any particular SLA has been met:

3.1 Any act or omission on the part of the Customer, its contractors or vendors, or any other entity over which the Customer exercises control or has the right to exercise control.

3.2 Verizon's or the Customer's scheduled maintenance.

3.3 Events or occurrences that result in "No Trouble Found" Trouble Tickets such as power outages due to customer turning off or unplugging the Private IP Satellite equipment.

3.4 Labor strikes.

3.5 Natural disasters.

3.6 Force majeure events beyond the reasonable control of Verizon including, but not limited to, acts of God, government regulation and national emergency.

3.7 Atmospheric, electromagnetic, solar, seismic, weather, and similar conditions that prevent the Private IP Service from functioning in accordance with the SLA.

3.8 An interruption occurring because Customer elects not to report or release the Private IP Satellite Access Service to Verizon for testing and repair and continues to use it on an impaired basis.

3.9 Interruptions during any period where Verizon or its agents are not permitted

access to the Private IP Satellite Access equipment (indoor and/or outdoor units) at the Customer's site.

3.10 Trouble that has been isolated to Customer owned and maintained (COAM) equipment or wiring.

3.11 Delays resulting from Verizon's need for additional information that Verizon has requested from Customer.

3.12 Customer configuration changes that were not communicated to Verizon or Customer changes that cause a service disruption and which must be rectified by the issuance of a Verizon change order.

Appendix A
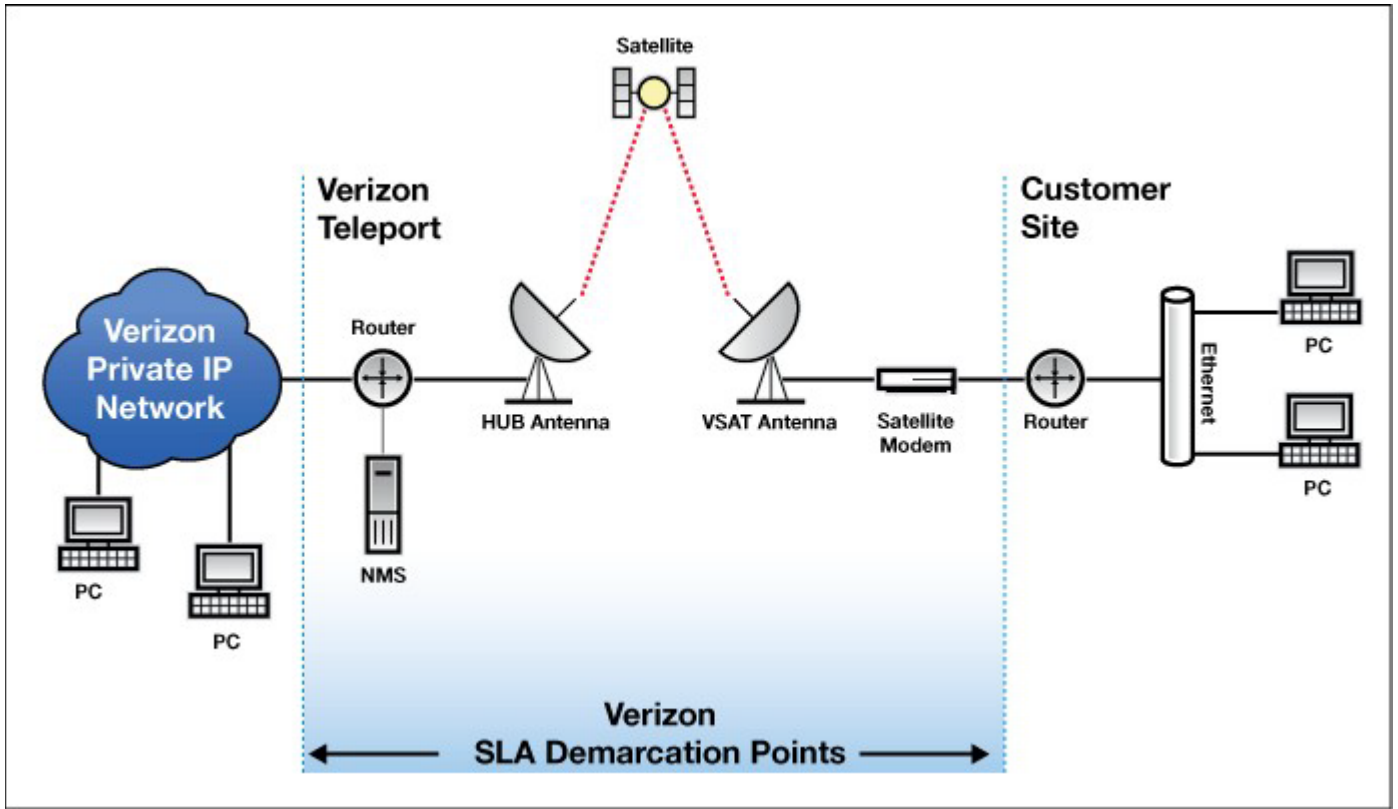
Ethernet Dedicated E-Line + Service Level Agreement

1. Summary.

1.1 Other than for orders governed by German law, the SLA for Dedicated E-Line sets forth Customer's sole and exclusive remedy for any claim relating to the provision of Dedicated E-Line pursuant to the Agreement. To obtain Dedicated E-Line SLA coverage of Platinum, Gold, Silver or Bronze Local Access Levels, Customer must commit to a minimum of a continuous one-year service commitment period for Dedicated E-Line. Verizon will determine in its sole discretion what records and data will be used as the basis for all Dedicated E-Line SLA calculations and determinations. The maximum amount of credit in any calendar month will not exceed the amount that, absent the credit, would have been charged for Dedicated E-Line in the month for which the particular Charges were subjected to the credit. Verizon reserves the right to amend the Dedicated E-Line SLA from time to time, effective upon written communication that may be delivered to Customer in the invoice or by other reasonable means.

1.2 For orders governed by German law only, all of the quality objectives and performance metrics in the Dedicated E-Line SLA should be understood as voluntary commitments of Verizon. The Dedicated E- Line SLA is provided free of charge and is not meant to give any guarantees or warranties as defined in the German Civil Code ("BGB"). It shall furthermore not extend the rights to which Customer is entitled pursuant to the BGB if Verizon is in breach of contract.

2. **Service Levels.** The Dedicated E-Line SLA consists of four Service Level Standards, a Service Level Objective, and associated metrics pertaining to the performance of Dedicated E-Line.

2.1 **Service Level Standards.** The following Service Level Standards are provided under the Dedicated E-Line SLA:
- Availability.
- Mean Time to Repair ("MTTR").
- Data Delivery Ratio ("DDR").
- Frame Jitter ("FJ").

2.2 **Service Level Objective.** The Service Level Objective under the Dedicated E-Line SLA is Round Trip Delay ("RTD"), as follows:

2.2.1 **Definition.** RTD is the PE-to-PE monthly average round trip delay as measured in milliseconds within or between the PE device pairs on the Core Network in the U.S. Region or at the Global Tier A or Global Tier B Geographic Locations (defined below), respectively.

2.2.2 **Process.** Upon Dedicated E-Line circuit implementation, Verizon will provide Customer with calculated or actual measured RTD. If at the time of such implementation, Verizon cannot meet the RTD estimate value that Verizon provided as a part of the supporting documentation with Customer's order, Customer has the option of either accepting the higher RTD or cancelling the circuit with the understanding that Customer will not be responsible for the payment of any applicable early termination charges for the circuit.

2.2.3 **Calculation.** RTD is determined by measuring transit delay in milliseconds between the PE device **pairs**, whether across the Core Network or between PE device pairs at the Core Network and at Global Tier A or Global Tier B, as applicable, and averaging the results over a thirty (30) day period from when the Trouble Ticket was opened. RTD calculation is as follows:

$$RTD = T2 - T1$$

where:

T1 is the time when an Ethernet frame leaves the ingress reference point (i.e., frame exit event) and T2 is the time when an Ethernet frame arrives back at the ingress reference point (i.e., frame return event) with the difference measured. RTD is measured between the respective origination and destination infrastructure ports (i.e., between the points where the frame enters and exits the Core Network, regardless of the Local Access to Core Network). External factors are excluded from the measurement, including, but not limited to, Local Access issues.

2.2.4   Customer is not eligible for any credits for a failure by Verizon to meet the RTD Service Level Objective.

3.   **Coverage Categories.** The Service Level Standards vary by Local Access operational levels and performance levels of Platinum or Gold, and are applicable to the specific Dedicated E-Line from the Geographic Region or Global Tier A countries or Global Tier B countries where Customer has a site sending traffic to the Geographic Region or country where Customer has a site receiving traffic based on the following variables:

3.1   **Local Access.** Dedicated E-Line SLA covers all Platinum, Gold, Silver and Bronze access.

3.2   **Outage Types.** The Dedicated E-Line SLA defines Service disruptions as either a "Hard Outage" or a "Service Issue". The Service restoration priority determines the ranking of the repair actions against other Service-related events. A Hard Outage has Priority 1 Service restoration priority with the exception of Hard Outages for Off-Net Silver, which has Priority 2 Service restoration priority. A Service Issue has Priority 2 Service restoration priority. The Dedicated E-Line Availability and MTTR Service Level Standards apply only to Hard Outages. RTD, DDR and Frame Jitter apply to Service Issues. Priority 3 and Priority 4 issues do not affect functionality of service and are not eligible for SLA credits.

Priority Level	Criteria
Priority 1	Total loss of Service or degraded Service to the extent that it is unusable by Customer and Customer is prepared to release its Service for immediate testing
Priority 2	Degraded Service, however, Customer is able to use the Service and is not prepared to release its Service for immediate testing
Priority 3	A problem with the Service that does not affect the functionality of the Service; including a single non-circuit specific quality of Service inquiry
Priority 4	Non-Service-affecting requests (e.g., a Customer request for an incident report) and all other queries not covered by Priority Faults 1–3 above. Priority 4 includes scheduled maintenance

4.   **Geographical Locations.** The SLA covers the provision of Dedicated E-Line in the following categories:
   ● **U.S. Region:** U.S. Mainland, Hawaii, and Alaska.
   ● **Global Tier A:** Austria, Belgium, Canada, Denmark, Finland France, Germany, Hong Kong, Ireland, Italy, Japan, Luxembourg, Netherlands, Norway, Singapore, South Korea, Spain, Sweden, Switzerland, United Kingdom.
   ● **Global Tier B:** Australia, Brazil, Bulgaria, Chile, China, Columbia, Czech Republic, Estonia, Greece, Guam, Hungary, India, Indonesia, Malaysia, Mexico, Philippines, Poland, Portugal, Puerto Rico, Romania, Russia, Taiwan.

5.   **Service Level Standards.** The following provides the metrics pertaining to the Dedicated-Line SLA Service Level Standards:

Service Level Standard	Local Access Level	Scope	Restorable Option 1 and 2 (U.S.)	Restorable Option 1 and 2 (Global Tier A)	Restorable Option 1 and 2 (Global Tier B)	Unprotected
Availability	Platinum	End-to-End	99.999%	99.999%	99.999%	99%
	Gold	End-to-End	99.9%	99.9%	99.9%	99%
	Silver	End-to-End	99.5%	99.5%	99.5%	99%
	Bronze	End-to-End	99%	99%	99%	99%
Mean Time To Repair (MTTR)	Platinum	End-to-End	2 Hours	4 Hours	4 Hours	24 Hours
	Gold	End-to-End	4 Hours	5 Hours	8 Hours	24 Hours
	Silver	End-to-End	4 Hours	8 Hours	8 Hours	24 Hours
	Bronze	End-to-End	24 Hours	24 Hours	24 Hours	24 Hours

Parameter	Access Level	Scope	Dedicated E-Line
Data Delivery Ratio ("DDR")	On-Net, Off-Net	PE-to-PE	≥ 99.995%
Frame Jitter	On-Net, Off-Net	PE-to-PE	< 5 ms

6. Service Level Standards – Definitions.

6.1 Availability.

6.1.1 **Definition.** The Availability Service Level Standard is the total number of Eligible Hard Outage Minutes for an applicable Dedicated E-Line Service connection, divided by the total number of minutes based on a 30-day calendar month. Availability includes the Local Access from a Customer Site to the PE and the Core Network. Availability excludes Customer-provided Local Access and CPE not provided as part of the Dedicated E-Line Service. A Dedicated E-Line point-to-point connection has one Local Access circuit on each end. An Availability Service Level Standard for a Dedicated E-Line provisioned with two different Local Access levels is determined by the Local Access level having the lowest Availability Service Level Standard.

6.1.2 **Calculation.** The Availability Service Level Standard is calculated after Customer opens a Priority 1 Trouble Ticket with Verizon and represents the percentage of time that the connection for Dedicated E-Line is available within a given calendar month except as specified below. Hard Outages for Dedicated E-Line provisioned with Silver or Bronze Access are handled as Priority 2 tickets and eligible for the Availability Service Level Standard.

Availability (%) = (1 - (Total Eligible Hard Outage Minutes per connection for Dedicated E-Line per month / 43,200 minutes)) x 100

6.1.3 **Credit Structure.** The Availability Service Level Standard credit is based on the number of Eligible Hard Outage Minutes independent of the actual percent availability calculation. Credit tables are provided in Section 7, below.

6.2   Mean Time To Repair ("MTTR").

6.2.1   **Definition.** MTTR is defined as the average time taken to restore a connection for Dedicated E-Line during a Hard Outage.

6.2.2   **Calculation.** MTTR is an average of the time taken to repair all Priority 1 Trouble Tickets generated by Customer on a specific connection for Dedicated E-Line except as specified below. The duration of each Hard Outage on a specific Dedicated E-Line is totaled at the end of each calendar month and divided by the corresponding number of Hard Outages for that Dedicated E-Line. Service Level Standard for Dedicated E-Line provisioned with two different Local Access Operational Performance levels is determined by the Local Access having the lowest Operational Performance level. This is calculated from Trouble Tickets opened during that calendar month. MTTR per calendar month is calculated for Customer's Service as follows:

Cumulative length of Hard Outage(s) per Dedicated E-Line / Total number of Trouble Tickets per calendar month per Dedicated E-Line

6.2.3   **Credit Structure.** The MTTR credit is based on the average repair times for all Hard Outages on a specific Dedicated E-Line within a calendar month. Credit tables are provided in Section 7, below. Customer may qualify for credits under the MTTR Service Level Standard in addition to the Dedicated E-Line Availability Service Level Standard for a particular Hard Outage.

6.3   Data Delivery Ratio ("DDR").

6.3.1   **Definition.** The DDR Service Level Standard represents the Dedicated E-Line effectiveness in transporting Customer frames across its Core Network. DDR is the average ratio of (i) Ethernet frames within a specified traffic priority class successfully delivered from PE to PE between PE devices within the Verizon Core Network to (ii) total Ethernet frames within the specified traffic priority class that are sent over Verizon's Core Network in a calendar month, excluding frames that are not delivered due in whole or in part to factors unrelated to Verizon's Core Network. The DDR Service Level Standard does not include frames that are dropped due to congestion at Customer's ingress or egress port.

6.3.2   **Standard.** If the applicable Dedicated E-Line Service does not meet the DDR Service Level Standard, the matter is considered a Service Issue and accorded to a Service Restoration Priority 2.

6.3.3   **Calculation.** DDR is calculated as the number of Dedicated E-Line test frames that are successfully delivered from PE to PE within the Core Network divided by the total number of Dedicated E-Line test frames sent per calendar month, as shown below:

DDR (DDR for load consisting of frames) = Frames Delivered/Frames Offered X 100

6.3.4   **Credit Structure.** To obtain a credit, Customer must open a Trouble Ticket in accordance with the "Credit Application – Process" section below. Verizon will work with Customer to confirm that a DDR issue exists with the Core Network and repair the problem(s), as applicable. Once Verizon confirms that the DDR on the Core Network for a specific Customer Dedicated E-Line connection does not comply with this Service Level Standard, Verizon will have 30 calendar days from the opening of the Trouble Ticket to address the Service Issue and close the applicable Trouble Ticket before Customer may be eligible for SLA credits. If, after 30 calendar days of opening the Trouble Ticket, the DDR Service Level Standard issue is not corrected, but has been agreed to as a Service Issue, Customer may qualify for credits.

6.4   Frame Jitter.

6.4.1 **Definition.** Frame Jitter is the average of the mean deviation of the difference in frame arrival time at the receiver compared to the sender for a pair of frames, calculated on the round trip from PE to PE within the Core Network.

6.4.2 **Standard.** The Service Level Standard for Frame Jitter applies to the Core Network performance. If the applicable Dedicated E-Line Service does not meet the Frame Jitter SLA, the matter is considered a Service Issue.

6.4.3 **Calculation.** Verizon calculates Frame Jitter by measuring the mean deviation of the difference in test frame spacing at the receiver compared to the sender for a pair of test frames, Verizon calculates the mean by sampling the Core Network frequently and averaging the results over a 30 calendar day period. The calculation for Frame Jitter "J (i)" for two consecutive frames i and i+1 is as follows:

$$J (i) = DeltaT(i) - DeltaT(i')$$

where

T(i) = time 1st byte of frame (i) is received by the source port (ingress time);
T(i+1) = time 1st byte of frame (i+1) is received by the source port (ingress time); T(i') = time 1st byte of frame (i') is received at the destination port (egress time);
T(i+1') = time 1st byte of frame (i+1') is received at the destination port (egress

time). and

DeltaT(i) = T(i+1) – T(i) (DeltaT(i) is the time interval between frames at ingress); DeltaT(i') = T(i+1') – T(i') (DeltaT(i') is the time interval between frames at egress).

The average jitter is calculated as follows:

$$J = Sum\ J(i)/(N-1)$$

where

"N" is the number of measurement intervals over thirty (30) day period.

6.4.4 **Credit Structure.** To obtain a credit, Customer must open a Trouble Ticket when a Frame Jitter issue surfaces as described in the "Credit Application – Process" section below. Verizon will work with Customer to confirm that a Frame Jitter issue exists with the Core Network and repair the problem(s), as applicable. Once Verizon confirms that the Frame Jitter on the Core Network between specific Customer Sites over a connection for the applicable Dedicated E-Line Service does not comply with this Frame Jitter Service Level Standard, Verizon will have thirty (30) calendar days to address Service Issue and close the applicable trouble before Customer may be eligible for credits under this Frame Jitter Service Level Standard. If, after thirty (30) calendar days of opening the Trouble Ticket, the Frame Jitter Service Level Standard issue is not corrected, Customer may qualify for credits. Customer's measure of Frame Jitter prior to opening a Trouble Ticket may be used by Verizon as a benchmark for the repair actions.

7. **Credit Amounts and Application Process.** Credit for SLA non-compliance is based on the MRC for each Dedicated E-Line connection. Credits vary by Service Level Standard, location, access type, and length of Hard Outage.

7.1 **Hard Outage Credit Schedules.**

Availability		Credits as a percent of MRC			
Dedicated E-Line Availability		U.S. and Global Tiers A, B	U.S. and Global Tier A	Global Tier B	Unprotected
From > (Minutes)	To ≤ (Minutes)	Platinum	Gold or Silver	Gold or Silver	Platinum, Gold or Silver
1	43	5%	NA	NA	N/A
43	120	10%	10%	5%	N/A
120	240	15%	10%	5%	N/A
240	360	25%	15%	10%	10%
360	480	30%	15%	10%	10%
480	720	40%	20%	10%	10%
> 720		50%	20%	10%	10%

MTTR		Credit as a Percent of MRC					
Global Dedicated E-Line Ethernet Core Network Outage Time		U.S.	Global Tiers A & B	U.S.	Global Tier A	Global Tier B	Unprotected
From Hr:Min:Sec	To Hr:Min:Sec	Platinum	Platinum	Gold, Silver or Bronze	Gold, Silver or Bronze	Gold, Silver or Bronze	Platinum, Gold, Silver or Bronze
2:00:00	3:59:59	4%	NA	NA	NA	NA	NA
4:00:00	4:59:59	4%	4%	2%	NA	NA	NA
5:00:00	7:59:59	10%	10%	4%	4%	NA	NA
8:00:00	11:59:59	10%	10%	4%	4%	4%	NA
12:00:00	23:59:59	10%	10%	4%	4%	4%	NA
≥ 24:00:00		10%	10%	4%	4%	4%	NA

7.2 **Frame Jitter and DDR Credit Schedule.**

Service Issue Credit Schedule	
Service Level Standard	Credit as % of MRC per connection of Dedicated E-Line *
Frame Jitter	20%
DDR	20%
* Service Issues occur between the PE Ports of the Dedicated E-Line Core Network. Consequently, two Customer connections for Dedicated E-Line will be affected by each Service Issue. For Service Issue credit purposes, the MRC will be defined as the average of the MRCs for each of the two affected Customer connections for Dedicated E-Line.	

7.3 **Credit Application Structure.** The credit structure described above will be applied to the corresponding net billing MRC for the specific connection(s) for the applicable Dedicated E-Line Service affected by the Hard Outage(s) or Service Issue(s). The total of all credits within any one month is limited to a maximum of one hundred percent (100%) of the MRC for the specific connection of Dedicated E-Line affected. Credits for Hard Outages are determined based on Eligible Hard Outage Minutes. Customer may claim the MTTR Service Level Standard credit in addition to the Dedicated E- Line Availability Service Level Standard credit in a given calendar month. All credits will be provided at the billing account number level in one lump sum, as opposed to each individual

Dedicated E-Line connection under multiple BANs. Credits do not apply to Local Access or backhaul charges. The appropriate amount will be credited to the Customer's account, appearing as a line item on an invoice delivered within ninety (90) calendar days following Verizon's confirmation that the Service Level Standard has not been met.

7.4   **Credit Application – Process.** Customer must complete two steps in order to qualify for an SLA credit. First, Customer must open a Trouble Ticket in response to Service issues. This first step brings the problem to the attention of Verizon customer service for intervention and repair, as required. The second step is to request the credit in writing from Customer's account team contact. The timing of the written request varies by Service Level Standard and is described below. The account team receiving the SLA credit request will confirm receipt with Customer by either email or fax. Verizon will then investigate the outage through the Trouble Ticket history and notify Customer of the outcome of the investigation either by email or fax.

7.4.1   **Opening a Trouble Ticket.** A Trouble Ticket can be opened either through the Customer Service Center or through the web-based tool called Service Event Management. The number for the assigned Customer Service Center is printed on Customer's invoice. Access to the Service Event Management tool can be requested at the first use. The tool and registration for new users is located at: https://enterprisecenter.verizon.com/.

7.4.2   Trouble Ticket and Credit Request by SLA

7.4.2.1 **Availability and MTTR.** In order for an outage to qualify for an SLA credit, Customer must perform the following tasks:
- Open a Trouble Ticket within 72 hours of the time the hard outage occurs.
- Customer submits an SLA credit request to Verizon within 30 days of the closing of the trouble ticket. The credit request may be submitted in writing to Customer's account team or via the Verizon Enterprise Center portal. The credit request must contain the following information:
  o The date the outage occurred.
  o The time the outage began and ended.
  o The circuit ID(s) for each affected connection.

7.4.2.2 **Frame Jitter and DDR.** In order to qualify for an SLA credit, Customer must perform the following tasks:
- Open a Trouble Ticket within 72 hours of the time the Service Issue arose.
- Submit a written SLA credit request to its account team within fifteen (15) days of the end of the repair period. The written request must contain the following information:
  o The date the Service Issue occurred.
  o The time the Service Issue began and ended.
  o The circuit ID(s) for each affected connection.

8.   **SLA Credit Time Limitation.**   If Verizon has not met the same Service Level Standard for three consecutive months –

8.1   Customer may elect to discontinue the affected Dedicated E-Line circuit(s) without liability except for charges incurred prior to discontinuation of the affected circuits. To cancel a Dedicated E-Line connection pursuant to the preceding, Customer must submit a written disconnect notice to its account team within 30 days following the end of either the third or subsequent consecutive month of Verizon's failure to meet the affected Service Level Standard; or

8.2   Customer may elect to continue such Dedicated E-Line circuits with the understanding that Customer may only receive a maximum of six (6) months of credits for any individual Service Level Standard within a twelve (12) month period.

9. Exclusions.

9.1 **General.** The following exclusions apply to all SLAs set forth herein. Service Level Standard measurements do not include any periods the Service Level Standard was not met resulting in whole or in part from the following:
- Hard Outage minutes associated with failure of CPE not provided as part of the Dedicated E-Line service.
- CPE associated with Local Access for Dedicated E-Line.

- Service disruptions due to Customer traffic exceeding Customer-subscribed bandwidth or sending frames that do not otherwise comply with the applicable limitations on Customer's subscribed bandwidth.
- Any act or omission on the part of the Customer, its contractors, vendors, End Users, or any other entity over which the Customer exercises control or has the right to exercise control.
- Verizon-planned outages or scheduled maintenance where Customer is given reasonable advance notice, or Customer's scheduled maintenance performed by any party other than Verizon.
- Emergency maintenance.
- Lapses of Dedicated E-Line service necessitated by new installations of Dedicated E-Line service or other Verizon services.
- Force Majeure events.
- Fiber cuts, outages, or faults that require planned or unplanned maintenance on submarine cable or plant (e.g., power plant, lasers, repeaters, etc.).
- Extended outages due to events outside of Verizon's control which affects both the ERO primary and ERO secondary paths.

9.2 **Availability Exclusions.** In addition to the General Exclusions, Availability Service Level Standard measurements do not include periods of Dedicated E-Line Outage resulting in whole or in part from one or more of the following causes:
- For on-net circuits, any act or omission on the part of any third party including but not limited to any Local Access provider other than any third-party over which Verizon exercises control;
- For off-net circuits, any act or omission on the part of any third party (other than a local access provider) over which Verizon exercises control;
- Periods of Service degradation where Customer has not released its Service for immediate testing.

9.3 **MTTR Exclusions.** In addition to the General Exclusions, MTTR Service Level Standard measurements do not include the following:
- The period of time during an outage when Verizon was not granted the necessary physical or logical access to Customer's premises and facilities for testing.
- A submarine cable outage for an Unprotected Service Level Standard.
- Any act or omission on the part of any third party, other than a Local Access provider, over which Verizon does not exercise control.
- Periods of Service degradation where Customer has not released its Service for immediate testing at Verizon's request.

9.4 **DDR Exclusions.** In addition to the General Exclusions, DDR Service Level Standard measurements do not include any of the following:
- Frames dropped at an infrastructure egress port due to improper Customer specifications of Customer connection speeds.
- Frames dropped at infrastructure egress port due to congestion caused by Customer's traffic exceeding subscription parameters.

Ethernet Switched E-Line + Service Level Agreement

1. **Service Level Agreement Summary.** The E-Line EVC Service Level Agreement ("E-Line EVC SLA") is available to Customers with a minimum of a one (1) year commitment for each E-Line EVC. Verizon reserves the right to amend the E-Line EVC SLA from time to time effective upon written communication that may be delivered in the invoice or by other reasonable means.

   The E-Line EVC SLA sets forth Customer's sole and exclusive remedy for any claim relating to E-Line EVC. Verizon will determine in its sole discretion what records and data will be the basis for all SLA calculations and determinations. The maximum amount of credit in any calendar month under this SLA will not exceed the amount that, absent the credit, would have been charged for the E-Line EVC service in that month for the particular E-Line EVC that was the subject of the credit.

2. This E-Line EVC SLA consist of five service level standards and associated metrics pertaining to the performance of E-Line EVC ("Service Level Standards"). Customer may qualify for credits when the Service Level Standards are not met.

2.1 **Available Service Level Standards.** The types of Service Level Standards offered are as follows:
   - Availability
   - Mean Time to Repair ("MTTR")
   - Round Trip Delay ("RTD")
   - Data Delivery Ratio ("DDR")
   - Frame Jitter ("FJ")

3. **Coverage Categories.** The Service Level Standards vary by Local Access operational levels and performance levels or Platinum, Gold, Silver and Bronze, and are applicable to the specific E-Line EVC(s) from the Geographic Region or Global Tier A Countries or Global Tier B Countries where Customer has a site sending traffic to the Geographic Region or country where Customer has a site receiving traffic based on the following variables:

3.1 **Local Access Types.** E-Line EVC SLA covers On-Net (Platinum) access and Off-Net access but does not apply to any Customer provided Local Access portion of Off-Net access. Service Levels for Off-Net access are offered in three levels of performance classifications:
   - Gold (Types 2*, 3, 4 and 5 network configurations)
   - Silver (Standard network configuration, DSL Services)
   - Bronze (DSL Services)

   * Type 2 network configuration is not available for EMEA/APAC-sold Customers

3.2 **Outage Types.** The E-Line EVC SLA defines service disruptions as either a Hard Outage or a Service Issue. The service restoration priority determines the ranking of the repair actions against other service related events. A Hard Outage has Priority 1 service restoration priority with the exception of Hard Outages for Off-Net Silver which has Priority 2 Service restoration priority. A Service Issue has Priority 2 Service restoration priority.

   The E-Line EVC Availability and MTTR Service Level Standards apply only to Hard Outages. RTD, DDR and Frame Jitter apply to Service Issues. Priority 3 and Priority 4 issues do not affect functionality of service and are not eligible for SLA credits.

Priority Level	Criteria
Priority 1	Total loss of Service or degraded Service to the extent that it is unusable by Customer and Customer is prepared to release its Service for immediate testing
Priority 2	Degraded Service, however, Customer is able to use the Service and is not prepared to release its Service for immediate testing
Priority 3	A problem with the Service that does not impact the functionality of the Service; including a single non-circuit specific quality of Service inquiry
Priority 4	Non Service affecting requests (e.g. a Customer request for an incident report) and all other queries not covered by Priority Faults 1 – 3 above. Scheduled maintenance

3.3 **Class of Service.** The E-Line EVC class of service ("CoS") delivery methodology is based on 802.1q IEEE standards and follows the Internet Engineering Task Force ("IETF") Differentiated Services ("Diff- Serv") model (i.e. IETF RFC 2474). The Verizon traffic priority classes are identified as:

Diff-Serv Queue	E-Line EVC Class of Service Naming	802.1q P-bits
EF	Real Time Data (RT)	5 and 6
AF4, AF41, AF42/43, AF3, AF31, AF32/33	Priority Data (PD)	4
AF2AF21, AF 22/23	Business Data (BD)	2 and 3
BE	Basic Data (B)	0,1, and 7

3.4 **Geographical Location.** The countries covered under this SLA are divided into the following categories:
- **U.S. Region:** Contiguous 48 United States, Hawaii, and Alaska
- **Global Tier A:** Austria, Belgium, Canada, Denmark, Finland France, Germany, Hong Kong, Ireland, Italy, Japan, Luxembourg, Netherlands, Norway, Portugal, Romania, Russia, Singapore, South Korea, Spain, Sweden, Switzerland, United Kingdom
- **Global Tier B:** Argentina, Australia, Brazil, Bulgaria, Chile, China, Columbia, Costa Rica, Czech Republic, Greece, Guam, Hungary, India, Indonesia, Malaysia, Mexico, New Zealand, Philippines, Poland, Puerto Rico, Taiwan, Thailand
- **Global Tier C:** Estonia, Iceland, Latvia, Lithuania, Monaco, Slovenia, Vietnam

4. **Service Level Standards.**

Parameter	Local Access Level	Scope	U.S.	Global Tier A	Global Tier B
Availability	On-Net Platinum	End-to-End	100%	100%	100%
	Off-Net Gold	End-to-End	99.9%	99.9%	99.9%
	Off-Net Silver	End-to-End	99.5%	99.5%	99.5%
Mean Time	On-net Platinum	End-to-End	2 Hours	4 Hours	4 Hours
	Off-Net (Gold)	End-to-End	4 Hours	5 Hours	8 Hours

To Repair (MTTR)	Off-Net Gold Silver	End-to-End	4 Hours	8 Hours	8 Hours

Parameter	Access Level	Scope	E-Line EVC	E-LAN EVC RT	E_LAN EVC PD/BD	E-LAN EVC B
Data Delivery Ratio (DDR)	On-Net, Off-Net	PE-to-PE	≥ 99.995%	≥ 99.995%	≥ 99.99%	≥ 99.95%
Round Trip Delay (RTD)	On-Net, Off-Net	PE-to-PE	See Applicable Standard Below			
Frame Jitter	On-Net, Off-Net	PE-to-PE	< 5 ms	< 5 ms	NA	NA

5. Service Level Standards Defined.

5.1 Availability.

5.1.1 **Definition.** Eligible Hard Outage Minutes are used to calculate Availability for E-Line EVC. Availability is the total number of Eligible Hard Outage Minutes in a calendar month for a specific Customer connection, divided by the total number of minutes based on a thirty (30) day calendar month. Availability includes the Local Access from the Customer premises to the Verizon E-Line EVC Provider Edge and the Core Network. Availability excludes Customer provided Local Access and CPE not provided as part of the E-Line EVC Service. An E-Line EVC point-to-point connection has one Local Access circuit on each end and Availability Service Level Standard for an E-Line EVC provisioned with two different Local Access levels is determined by the Local Access level having the lowest Availability Service Level Standard.

5.1.2 **Standard.** See Service Level Standard tables above.

5.1.3 **Calculation.** Availability is calculated after Customer opens a Priority 1 Trouble Ticket with Verizon and represents the percentage of time that the connection for E-Line EVC is available within a given calendar month except as specified below. Hard Outages for E-Line EVC provisioned with Off-Net Silver are handled as Priority 2 tickets and eligible for the Availability Service Level Standard.

Availability (%) = (1 - (Total Eligible Hard Outage Minutes per connection for E-Line EVC per month
/ 43,200 minutes)) x 100

5.1.4 **Credit Structure.** The credit is based on the number of Eligible Hard Outage Minutes independent of the actual percent availability calculation. Credit tables are provided in Section 6.

5.2 Mean Time To Repair ("MTTR").

5.2.1   **Definition.** MTTR is defined as the average time taken to restore a connection for E-Line EVC during a Hard Outage an E-Line EVC has one Local Access circuit on each end and Availability Service Level Standard for E-Line EVC provisioned with two different Local Access levels is determined by the Local Access level having the lowest Availability Service Level Standard.

5.2.2   **Standard.** See Service Level Standard tables above.

5.2.3   **Calculation.** MTTR is an average of the time taken to repair all Priority 1 Trouble Tickets generated by Customer on a specific connection for E-Line EVC except as specified below. Hard Outages for Off-Net Silver are handled as Priority 2 tickets and Eligible for MTTR. The duration of each Hard Outage on a specific E-Line EVC is totaled at the end of each calendar month and divided by the corresponding number of Hard Outages for that E-Line EVC. This is calculated from Trouble Tickets opened during that calendar month. MTTR per calendar month is calculated for Customer's Service as follows:

> Cumulative length of Hard Outage(s) per E-Line EVC /Total number of Trouble Tickets per calendar month per E-Line EVC

5.2.4   **Credit Structure.** The credit is based on the average repair times for all Hard Outages on a specific E-Line EVC within a calendar month. Credit tables are provided in Section 6. Customer may qualify for credits under the MTTR Service Level Standard in addition to the E-Line EVC Availability Service Level Standard for a particular Hard Outage.

5.3   Data Delivery Ratio ("DDR").

5.3.1   **Definition.** The DDR Service Level Standard represents the E-Line EVC effectiveness in transporting Customer frames across its Core Network. DDR is the average ratio of Ethernet frames within a specified traffic priority class that are successfully delivered from PE to PE between Provider Edge devices within the Verizon Core Network to total Ethernet frames within the specified traffic priority class that are sent over Verizon's Core Network in a calendar month, excluding frames that are not delivered due in whole or in part to factors unrelated to Verizon's Core Network. The DDR Service Level Standard for E-Line EVC Real Time Data applies only to traffic that complies with the applicable limitations of Customer's subscribed E-Line EVC Class of Service. The DDR Service Level Standard does not include frames that are dropped due to congestion at the Customer ingress or egress port.

5.3.2   **Standard.** See Service Level Standard tables above. If the Ethernet Switched E-Line service does not meet the DDR Service Level Standard, the matter is considered a Service Issue and accorded a Service Restoration Priority 2.

5.3.3   **Calculation.** DDR is calculated as the number of E-Line EVC test frames, EVC test frames within the specified traffic priority class that are successfully delivered from PE to PE within the Core Network divided by the total number of E-Line EVC test frames, test frames within the specified traffic priority class, sent per calendar month is:

> DDR (DDR for load consisting of frames) = frames Delivered/frames Offered *100

5.3.4   **Credit Structure.** To obtain a credit, Customer must open a Trouble Ticket in accordance with the "Process for Customer to Apply for SLA Credits" section below. Verizon will work with Customer to confirm that a DDR issue exists with the Core Network

and repair the problem(s), as applicable. Once Verizon confirms that the DDR on the Core Network for a specific Customer E-Line EVC connection does not comply with this Service Level Standard, Verizon will have thirty (30) calendar days from the opening of the Trouble Ticket to address the Service Issue and close the applicable Trouble Ticket before Customer may be eligible for SLA credits. If, after thirty (30) calendar days of opening the Trouble Ticket, the DDR Service Level Standard issue is not corrected, but has been agreed to as a Service Issue, Customer may qualify for credits.

5.4   Frame Jitter.

5.4.1   **Definition.** Frame Jitter is the average of the mean deviation of the difference in frame arrival time at the receiver compared to the sender for a pair of frames, calculated on the round trip from PE- to- PE within the Core Network.

5.4.2   **Standard.** The Service Level Standard for Frame Jitter applies to the Core Network performance. If the E-Line EVC service does not meet the Frame Jitter SLA, the matter is considered a Service Issue.

5.4.3   **Calculation.** Verizon calculates Frame Jitter by measuring the mean deviation of the difference in test frame spacing at the receiver compared to the sender for a pair of test frames, Verizon calculates the mean by sampling the Core Network frequently and averaging the results over a 30 calendar day period. The calculation for Frame Jitter "J (i)" for two consecutive frames i and i+1 is as follows:

$J (i) = DeltaT(i)$

$– DeltaT(i')$

where

$T(i)$ = time 1st byte of frame (i) is received by the source port (ingress time) $T(i+1)$ = time 1st byte of frame (i+1) is received by the source port (ingress time) $T(i')$ = time 1st byte of frame (i') is received at the destination port (egress time)
$T(i+1')$ = time 1st byte of frame (i+1') is received at the destination port

(egress time) and

$DeltaT(i) = T(i+1) – T(i)$ (DeltaT(i) is the time interval between frames at ingress) $DeltaT(i') = T(i+1') – T(i')$ (DeltaT(i') is the time interval between frames at egress)

The average jitter is calculated as follows:

$J = Sum J(i) /(N-1)$

where

N is the number of measurement intervals over thirty (30) day period

5.4.4   **Credit Structure.** To obtain a credit, Customer must open a Trouble Ticket when a Frame Jitter issue surfaces as described in the "Process for Customer to Apply for SLA Credits" section below. Verizon will work with Customer to confirm that a Frame Jitter issue exists with the Core Network and repair the problem(s), as applicable. Once Verizon confirms

that the Frame Jitter on the Core Network between specific Customer locations over a connection for E-Line EVC does not comply with this Service Level Standard, Verizon will have thirty (30) calendar days to address Service Issue and close the applicable trouble before Customer may be eligible for credits under this SLA. If, after thirty (30) calendar days of opening the Trouble Ticket, the Frame Jitter Service Level Standard issue is not corrected, Customer may qualify for credits. Customer's measure of Frame Jitter prior to opening a Trouble Ticket may be used by Verizon as a benchmark for the repair actions.

5.5   Round Trip Delay ("RTD").

5.5.1   **Definition.** RTD is the PE to PE monthly average round trip delay as measured in milliseconds within or between the Geographic US Regions or Global Tier A Countries or Global Tier B Countries respective PE device pairs on the Verizon Core Network.

5.5.2   **Standard**. RTD Service Level Standard performance measurements for international and U.S. locations are stated in the https://enterprise.verizon.com/service_guide/secure/ethernet-rtd-sla- matrix-SG.xlsx.

5.5.3   **Calculation.** RTD is determined by measuring transit delay in milliseconds across the Verizon Core Network and averaging the results over a thirty (30) day period from when the Trouble Ticket was opened.

RTD calculation is as follows:

RTD = T2 – T1

where:

T1 is the time when an Ethernet frame leaves the Ingress Reference Point (i.e., Frame exit event) and T2 is the time when an Ethernet Frame arrives back at the Ingress Reference Point (i.e. Frame return event) with the difference measured.

RTD is measured between the respective origination and destination infrastructure Ports, i.e. between the points where the Frame enters and exits Verizon's Core Network, regardless of the Local Access to Verizon's Core Network. External factors, including, but not limited to, Local Access issues, are excluded from the measurement.

5.5.4   **Credit Structure.** If the RTD Service Level Standard is not met, it is a Service Issue. If the RTD metric for a pair of Customer Sites is not being met, Customer may be eligible for an SLA credit.

To obtain a credit, a Trouble Ticket must be opened with Verizon in accordance with the "Process for Customer to Apply for SLA Credits" section below. Verizon will work with Customer to confirm that a RTD issue exists and repair the problem(s), as applicable. Once Verizon confirms that the RTD Service Level Standard is not being met, Verizon will have thirty (30) calendar days from the opening of the Trouble Ticket to repair the Service to meet the RTD Service Level Standard and close the applicable Trouble Ticket, and in such an event, Customer will not be eligible for a credit. If, after thirty (30) calendar days of opening the trouble ticket, the RTD Service Level Standard continues to not be met, Customer may qualify for a credit. Customer's measurement of RTD prior to opening a Trouble Ticket may be considered by Verizon in determining the need to repair the Service.

RTD Credit Table:

For Service Level Standard not met	Credit as % of MRC per E-Line EVC
Round Trip Delay (RTD)	20%

5.5.5 **Exclusions.** In addition to the General Exclusions, as set out in the General Exclusion Section below, PE RTD Service Level Standard measurements for E-Line EVC do not include the following:

- All Customer data traffic that is marked Real Time by Customer and is not compliant with the subscribed E-Line EVC Real Time Class of Service feature or any other data traffic that is not compliant with the applicable subscribed E-Line EVC Class of Service.
- All Customer data traffic that is marked by Customer using 802.1p-bit settings not supported by the Verizon E-Line EVC Core Network.

6. Credit Amounts and Application Process.

6.1 Credit Tables by Outage Type.
- The credits vary by Service Level Standard, location, access type and length of Hard Outage.
- Credit is based on the MRC for each connection of the E-Line EVC.

6.1.1 Hard Outage Credit Schedules.

Availability		Credits as a percent of MRC		
E-Line EVC Availability		Global Tiers A, B and US	U.S. and Global Tier A	Global Tier B
From (Mins)	To (Mins)	On-Net (Platinum)	Off-Net (Gold or Silver)	Off-Net (Gold or Silver)
1	43	5%	NA	NA
44	120	10%	10%	5%
121	240	15%	10%	5%
241	360	25%	15%	10%
361	480	30%	15%	10%
481	720	40%	20%	10%
> 720		50%	20%	10%

MTTR		Credit as a Percent of MRC				
Global Switched E-Line Ethernet Core Network Outage Time		U.S.	Global Tiers A & B	U.S.	Global Tier A	Global Tier B
From Hr:Min:Sec	To Hr:Min:Sec	On-Net (Platinum)	On-Net (Platinum)	Off-Net (Gold or Silver)	Off-Net (Gold or Silver)	Off-Net (Gold or Silver)
2:00:00	3:59:59	4%	NA	NA	NA	NA
4:00:00	4:59:59	4%	4%	2%	NA	NA
5:00:00	7:59:59	10%	10%	4%	4%	NA
8:00:00	11:59:59	10%	10%	4%	4%	4%
≥ 12:00:00		10%	10%	4%	4%	4%

6.1.2 RTD, Frame Jitter and DDR Credit Schedule.

Service Issue Credit Schedule	
Service Level Standard	**Credit as % of MRC per connection of E-Line EVC ***
RTD	20%
Frame Jitter	20%
DDR	20%

* Service Issues occur between the PE Ports of the E-Line EVC Core Network. Consequently, two
(2) Customer connections for E-Line EVC will be affected by each Service Issue. For Service Issue credit purposes, the MRC will be defined as the average of the MRCs for each of the two impacted Customer connections for E-Line EVC.

6.1.3 **Credit Application Structure.** For any calendar month in which Verizon fails to meet any one of the Service Level Standards stated in this document, the credit structure listed above will be applied to the corresponding net billing MRC for the specific connection(s) for E-Line EVC) affected by the Hard Outage(s) or Service Issue(s). The total of all credits within any one month is limited to a maximum of one hundred percent (100%) of the MRC for the specific connection of E-Line EVC affected. Credits for Hard Outages are determined based on Eligible Hard Outage Minutes. Customer may claim the MTTR Service Level Standard credit in addition to the E-Line EVC Availability Service Level Standard credit in a given calendar month. Customer can request Verizon to check all of the standard Service Level Standard commitments when requesting credits in any given month.

All credits will be provided at the billing account number level in one lump sum, as opposed to each individual E-Line EVC connection under multiple BANs. Credits do not apply to Local Access or backhaul charges. The appropriate amount will be credited to the Customer's account, appearing as a line item on a bill delivered within ninety (90) calendar days following Verizon's confirmation that the Service Level Standard has not been met.

6.1.4 **Process for Customer to Apply for SLA Credits.** Customer completes two steps in order to qualify for an SLA credit. First, Customer must open a Trouble Ticket in response to Service issues. This step brings the problem to the attention of Verizon customer service for intervention and repair. The second step is to request the credit in writing from the Verizon account team contact. The timing of the written request varies by Service Level Standard and is detailed below.

The Verizon account team receiving the SLA credit request will confirm receipt with Customer by either email or fax. Verizon will then investigate the outage through the Trouble Ticket history and notify Customer of the outcome of the investigation either by email or fax. The SLA credit is requested with a reason code that consists of the phrase "SLA Credit" plus the involved metric. For example, an SLA credit for MTTR has the reason code of "SLA Credit MTTR".

6.1.4.1 **Opening a Trouble Ticket.** A Trouble Ticket can be opened either through the Customer Service Center or through the web-based tool Service Event Management. The number for the assigned Customer Service Center is printed on Customer's invoice. Access to the Service Event Management tool can be requested at the first use. The tool and registration for new users is located at https://customercenter.verizonbusiness.com/.

6.1.4.2 **Submitting a Service Level Agreement Credit Request.** The request for an SLA

credit is submitted in writing from Customer to the Verizon account team. The timing and content of the request varies by Service Level Standard. This communication can be through email or by fax. Customer may elect to receive verification on all of the Service Level Standards offered in conjunction with their E-Line EVC service when requesting calculations for any single item.

6.1.4.3 Trouble Ticket and Credit Request by Service Level Agreement.

6.1.4.3.1 **E-Line EVC Availability and Mean Time To Repair.** In order for the outage to qualify for an SLA credit Customer must do the following:
- Open a Trouble Ticket within seventy two (72) hours of the time the hard outage.
- Submit SLA credit request to their Verizon account team in writing within fifteen (15) days of opening the Trouble Ticket. The written request must contain the following information:
  - o The date the outage occurred.
  - o The time the outage began and ended.
  - o The circuit ID(s) for each connection that was impacted.

6.1.4.3.2 **E-Line EVC Round Trip Delay, Frame Jitter and Data Delivery Ratio.** In order to qualify for an SLA credit Customer must do the following:
- Customer opens a Trouble Ticket within seventy two (72) hours of the time the Service Issue arose.
- Customer submits SLA credit request to the Account Team in writing within fifteen (15) days of the end of the repair period. The written request must contain the following information:
  - o The date the Service Issue occurred.
  - o The time the Service Issue began and ended.
  - o The circuit ID(s) for each connection that was impacted.

7. **Service Level Agreement Credit Time Limitation.** After three consecutive months where Verizon has not met the same Service Level Standard (e.g. the Service Level Standard for E-Line EVC has not been met) for the same E-Line EVC:

7.1 Customer may elect to discontinue E-Line EVC service for the particular E-Line EVC without liability except for charges incurred prior to discontinuation of the E-Line EVC. To cancel a connection for E- Line EVC, Customer must submit a written disconnect notice to its Verizon account team within thirty
(30) days following the end of either the third or subsequent consecutive month of Verizon's failure to meet the Service Level Standard; or

7.2 Customer may elect to continue connection(s) for E-Line EVC with the understanding that. Customer can only receive a maximum of six (6) months of credits for any individual Service Level Standard within a 12-month period.

8. **Exclusions.**

8.1 **General Exclusions.** The following exclusions apply to all Service Level Standards contained in this document. Service Level Standard measurements do not include any periods the Service Level Standard was not met resulting in whole or in part from the following:
- Hard Outage minutes associated with failure of CPE not provided as part of the E-Line EVC service;
- CPE associated with Local Access for E-Line EVC;
- Service disruptions due to Customer traffic exceeding Customer-subscribed bandwidth

or sending frames that do not otherwise comply with the applicable limitations on Customer's subscribed bandwidth;
- Any act or omission on the part of the Customer, its contractors or vendors, or any other entity over which the Customer exercises control or has the right to exercise control;
- Scheduled maintenance on the part of Customer, Customer contractors or Customer vendors;
- Scheduled maintenance on the part of Verizon which is within Verizon's maintenance windows;
- Emergency maintenance;
- Lapses of E-Line EVC service associated with new installations (i.e. before new service acceptances by Customer);
- Force Majeure Events as defined in Customer's Contract or on the Guide.

8.2 **E-Line EVC Availability Service Level Standard Exclusions.** In addition to the General Exclusions, E-Line EVC Availability Service Level Standard measurements do not include periods of E-Line EVC Outage resulting in whole or in part from one or more of the following causes:
- For on-net circuits, any act or omission on the part of any third party including, but not limited to any Local Access provider other than any third-party over which Verizon exercises control;
- For off-net circuits, any act or omission on the part of any third party other than a local access provider over which Verizon exercises control;
- Periods of Service degradation where Customer has not released its Service for immediate testing.

8.3 **Mean Time To Repair Exclusions.** MTTR applies only in those cases in which the Customer informs Verizon of an E-Line EVC Outage (i.e., opens a Trouble Ticket) and subsequently allows necessary physical or logical access to its premises and facilities for testing. In addition to the General Exclusions, MTTR Service Level Standard measurements do not include the following:
- Any act or omission on the part of any third party, other than a local access provider over which Verizon exercises control;
- Periods of Service degradation where Customer has not released its Service for immediate testing.

8.4 **Data Delivery Ratio Exclusions.** In addition to the General Exclusions, DDR Service Level Standard measurements do not include any of the following:
- Frames dropped at infrastructure egress due to improper Customer specifications of Customer connection speeds;
- E-Line EVC Traffic marked Real Time Data by Customer that exceeds the subscribed Real Time Class of Service bandwidth;
- Frames dropped at infrastructure egress Port due to congestion caused by Customer's traffic exceeding subscription parameters.

Wavelength Services Solution + Service Level Agreement

1. Scope.

1.1 General.

1.1.1 This Service Level Agreement ("SLA") applies to Verizon's Wavelength Services on an end to end basis, including Local Access provided by Verizon in conjunction with Wavelength Services, except where otherwise noted (e.g., for Customer provided access, as defined below). Customer may receive credits for Verizon not meeting the Circuit Availability or RTD Service Level Standards as set forth below.

1.1.2 Except as set forth in this SLA, Verizon makes no claims regarding the availability or performance of Wavelength Services or the Local Access provided with such services.

1.2 Wavelength Services Service Level Class.

1.2.1 Service Level Class defines the overall level of protection for a Wavelength Services end- to-end circuit. The Service Level Class is derived from the combination of loop/access and core segment protection types for a specific circuit. Specific Service Level Standards are associated with each Service Level Class:

1.2.1.1 **Unprotected.** Verizon will provide a Wavelength Services circuit that is unprotected end-to-end. Loop/Access segment(s) is unprotected, and Wavelength Service segment is unprotected.

1.2.1.2 **Protected Access.** Verizon will provide a Wavelength Services circuit that is only protected in the Local Access segment. Loop/Local Access segment(s) is either protected or unprotected and Core segment is unprotected. This Service Level Class requires that at least one Local Access segment is protected.

1.2.1.3 **Protected Dual Path.** Verizon will provide a Wavelength Services circuit that is protected end to end. Loop/Local Access segment(s) is protected, and Core segment is protected. Protected Dual Path can be a metro service or a long haul service with protected IXC transport and protected access on both ends.

1.2.1.4 **Protected IXC.** Verizon provides a Wavelength Service circuit that is protected in the IXC transport but is provisioned with un-protected access on either end (either Type 1 or Type 3).

1.2.2 Wavelength Services Service Level Standards detailed in Section II below are end-to-end unless specified otherwise and will vary depending on the Service Level Class applicable to the circuit.

2. **Service Level Standards.** Circuit Availability.

2.1.1 **Circuit Availability Standard**. Circuit Availability is defined as the total number of minutes in a calendar month during which a Wavelength Services circuit is available to exchange data between two Customer Sites, divided by the total number of minutes in a calendar month.

2.1.2 The Circuit Availability Standard applies only to "Hard Outages", i.e., an inability to exchange data end to end. Service is not considered unavailable until at least 60

consecutive seconds of unavailability have elapsed during any 15 minute interval. Slow service or other service degradation is not considered a Hard Outage but may be considered for the RTD Service Level Standard, as defined below.

2.2   Circuit Availability.

Service Level Class Name	Circuit Availability
Unprotected	99.5%
Protected Access (both ends)	99.75%
Protected Dual Path (metro protection or IXC protection with protected access on both ends)	99.99%
Protected IXC (Protected IXC transport and one or more ends with un-protected access)	99.75%

2.2.1   **Calculation**: To calculate the percentage of Circuit Availability, add the total number of minutes that Customer's circuit was available to Customer to exchange data end-to-end during a calendar month (i.e., not subject to a Hard Outage), plus any minutes during which the circuit was not available to exchange data between Customer Sites, due to events described in Section VI, Exclusions. Divide the sum by the total number of minutes in the calendar month. Multiply the quotient by 100.

100 x (Total Minutes in a calendar month - Total Minutes of Non-Availability) =
Circuit Availability
Total Minutes in a calendar
month

The total number of minutes in a calendar month is as follows:

Month in Days	Total Minutes
31 Day Month	44,640
30 Day Month	43,200
29 Day Month	41,760
28 Day Month	40,320

2.3   Round Trip Delay (RTD).

2.3.1   **Round Trip Delay Standard.** RTD is available only if customer has purchased the RTD option. RTD is defined as the Layer 1 round-trip delay across the Verizon Network between Customer Sites of a Wavelength Services circuit. The RTD standard and SLA metric is circuit specific and represents a theoretical estimate based on pre-sale design.

2.3.2   Round Trip Delay.

2.3.2.1   When the RTD SLA option is requested by the Customer, Verizon will provide an end- to-end RTD estimate as part of the Service Order Form. Actual RTD performance may vary at circuit completion.

2.3.2.2   Verizon will maintain the circuit within the specified RTD throughout the term of the service. The RTD SLA metric applies to the working channel (home route) of an IXC protected circuit and does not apply when the circuit is on the protect channel.

2.3.3   **Calculation**:

2.3.3.1   When the RTD SLA option is purchased by the Customer, Verizon will append the end- to-end RTD estimate as part of the order documentation, which serves as the Service Level Standard for RTD.

2.3.3.2   Upon test and turn up, Verizon will provide Customer with calculated or actual measured RTD. If at the time of circuit turn-up, Verizon cannot meet the RTD estimate value that Verizon provided as a part of the order documentation, Customer has the option of either accepting the higher RTD or cancelling the circuit with the understanding that Customer will not be responsible for the payment of early termination charges for the circuit.

2.3.3.3   RTD is a service level standard. Measurement of RTD may require testing the circuit in intrusive mode, in accordance with Verizon testing procedures, until such time as in- service measurements are supported. When Customer determines that the circuit is experiencing degraded service to the extent that it exceeds the expected RTD, Customer must open a trouble ticket with Verizon, and release the circuit for testing and repair. To measure the delay, a signal may be sent from one end of the circuit. At the other end of the circuit, an external loop-back may be performed on the card equipment, and the returned signal measured at the sending end. This includes the Verizon transmission equipment located at the Customer Site. This only covers demarcation point to demarcation point. This does not include Customer's equipment ("CPE"), any third party equipment, or any Customer application on a covered circuit. Verizon's measurement of RTD will be used as the value to determine whether the RTD SLA has been met. Outage minutes resulting from testing will not be considered for Hard Outage SLAs. If delay should increase during the term of the circuit, Verizon will work with Customer to restore delay values to not exceed the RTD value that was agreed to prior to the completion of circuit.

2.4   Time to Repair (TTR)
The TTR standard applies only to "Hard Outages". Slow service or other service degradation is not considered a Hard Outage. The time to repair a circuit starts when a Trouble Ticket is opened by Verizon for a Hard Outage and concludes with restoration of the Wave circuit—i.e., the time that the Hard Outage condition no longer exists.

Class of Service Name	Time to Repair
Unprotected	4 Hours
Protected Access	4 Hours
Protected Dual Path	4 Hours
Protected IXC	4 Hours

3.   Service Level Objectives.

3.1   **Service Installation Objective:** Wavelength Services have a service installation target objective of up to 90 business days. Construction needed anywhere in the process could result in additional Wavelength Services installation intervals of up to 90 business days. There are no applicable credits for this objective.

4.   Qualification Process.

4.1   **General.** Customer is eligible to receive credits if Verizon does not meet the Service Level Standards set forth above. To qualify for such credits, Customer must comply with the procedures set forth in this section. Credits are based on a stated percentage of the MRC for the service component in Customer's Agreement for which the Service Level

Standard has not been met, as applicable. Subject to the limitations set forth in section V. A. below, the maximum credit available to Customer under any combination of the Circuit Availability and RTD within a single calendar month is 100 percent of the MRC for all segments of the Wavelength Services circuit, including Local Access segments as applicable, identified on the order documentation for the month during which the Service Level Standard was not met. Verizon data and calculations will be used to determine if a Service Level Standard has not been met and a credit is due. Verizon will issue a credit due, net of discounts and taxes, within 90 days of its determination that a Service Level Standard was not met.

4.2   Circuit Availability and RTD Credit Process.

4.2.1   Customer must perform the following to become eligible or qualify for credit under either the Circuit Availability standard or the RTD standard:

4.2.2   Open a Trouble Ticket upon first becoming aware of a Hard Outage or upon experiencing a change in RTD, by using one of the following available methods:

4.2.3   Using the Customer Center portal on the Verizon website, or

4.2.4   Calling the Customer Service toll free number located on Customer's invoice, or

4.2.5   Tickets that are issued via Proactive Notification method, or

4.2.6   Submit in writing the following information no later than thirty (30) days from the end of the calendar month in which the Wavelength Services circuit was restored:

4.2.7   All applicable Trouble Ticket numbers associated with each circuit experiencing Hard Outages, or changes in RTD;

4.2.8   The date and time the Trouble Ticket(s) were opened; and

4.2.9   The circuit identifier number for each circuit that experienced the Hard Outage, or changes in RTD.

4.2.10 Failure to comply with each of the preceding requirements may result in Verizon denying Customer's request for credit under either the Circuit Availability or RTD Standard.

4.3   A Trouble Ticket is a Verizon document used to record network service issues. Trouble Tickets are time stamped when opened and closed. The time stamps are used to calculate whether (i) the Circuit Availability and RTD standards under this SLA have been met, (ii) the issue reported is considered a Hard Outage claim or RTD claim or otherwise, as applicable; and (iii) the issue is not excluded by the items listed in Section VI (Exclusions) below.

4.4   TTR Credit Process.
Customer must perform the following to become eligible or qualify for credit under the TTR standard:

4.4.1   Open a Trouble Ticket within four hours of first learning of a Hard Outage by using one of the following available methods:

4.4.1.1   Using the Customer portal on the Verizon website, or

4.4.1.2 Calling the Customer Service toll free number located on Customer's invoice, or

A trouble ticket is required to be opened within four hours of first learning of a Hard Outage: and

4.4.2 Submit in writing the following information no later than thirty (30) days from the end of the calendar month in which the Wave service was restored:

4.4.2.1 All applicable Trouble Tickets numbers associated with each circuit experiencing Hard Outages:

4.4.2.2 The date and time the Trouble Ticket(s) were opened; and

4.4.2.3 The circuit ID number for each circuit that experienced the Hard Outage.

Failure to comply with each of the preceding requirements may result in Verizon denying Customer's request for credit under either TTR Standard. A Trouble Ticket is a Verizon document used to record network service issues. Trouble Tickets are time stamped when opened and closed. The time stamps are used to calculate whether (i) the Service Availability and TTR standards under this SLA have been met, (ii) the issue reported is considered a Hard Outage claim; and (iii) the issue isn't excluded by the items listed in Section VI (Exclusions) below.

5. Credits.

5.1 **Circuit Availability.** During any calendar month in which Verizon fails to meet the Circuit Availability standard for a specific Customer circuit, and provided the conditions set forth in this SLA have been met, Customer is eligible to receive a credit applied against the MRC for all segments of the Wavelength Services circuit, including Local Access segments as applicable, identified on the order documentation, for the month during which the Service Level Standard was not met, as follows:

Actual Monthly Circuit Availability		Credits as a percent of Wavelength Services (including Local Access, as applicable) MRC		
% of Up Time		Wavelength Services – Protected Dual Path or **Protected IXC with un-protected Access**	Wavelength Services – Protected Access	Wavelength Services – Unprotected
less than	greater than or equal to			
99.999%	99.99%			
99.99%	99.9%	10%		
99.9%	99.75%	20%		
99.75%	99.5%	30%	10%	
99.5%	99.0%	40%	20%	10%
99.0%	98.5%	70%	30%	20%
98.5%	98.2%		40%	30%

Actual Monthly Circuit Availability		Credits as a percent of Wavelength Services (including Local Access, as applicable) MRC		
% of Up Time		Wavelength Services – Protected Dual Path or **Protected IXC with un-protected Access**	Wavelength Services – Protected Access	Wavelength Services – Unprotected
less than	greater than or equal to			
98.2%	97.5%	100%	70%	40%
97.5%	96.67%		100%	70%
<96.67%				100%

5.2   For a failure to meet the Circuit Availability standard for the same circuit for three consecutive months, Customer may terminate service for that circuit without incurring termination liability, except for charges incurred prior to service termination, if Customer notifies Verizon in writing of its intent to terminate the circuit no later than 30 days after the conclusion of the third month or any consecutive month in which the same Service Level Standard is not met for that circuit. After a failure of three consecutive months or more, Verizon, upon written notice to Customer, may terminate its performance obligations under this SLA.

5.3   If the Hard Outage carries over from one month to the next, the Hard Outage is deemed to have occurred in the month in which the Wavelength Services circuit was restored.

5.4   In addition, Customer will not be eligible for any credits pursuant to this SLA for more than a total of six (6) months in any twelve (12) month period.

5.5   Round Trip Delay ("RTD"). In the event that Verizon fails to meet the RTD standard, and provided the conditions set forth in this SLA have been met, Customer is eligible to receive a credit, as follows:

5.5.1   **Order Cancellation Credit.** When Customer's Service Order includes an RTD SLA, and Verizon does not provide the service that meets the Customer's requested RTD at the time of installation, Customer is eligible to receive a one-time order cancellation credit if Customer cancels the order due to RTD not being met. This credit only applies when Customer chooses to cancel the order. Customer is responsible for any fees assessed in accordance with a cancellation of order and Service cancellation or change by Customer as may be specified in the Agreement.

Order Cancellation Credit for Wavelength Service:	$800
Order Cancellation Credit for Local Access, per access (if applicable):	$800

5.5.2   **RTD Restoral Credit.** When Customer determines that the circuit is experiencing degraded service to the extent that it exceeds the expected RTD, and provided the conditions set forth in this SLA have been met, Customer is eligible to receive a one-time credit based on a stated percentage of the MRC, in accordance with the number of days it takes Verizon to restore the circuit to meet RTD requirements. If Customer cancels the service due to Verizon's inability to meet RTD requirements, early termination liability will be assessed in accordance with the Agreement, unless

otherwise stated below.

Round Trip Delay Restoral Credits	
Days it takes to restore RTD	**One-Time Credit Allowance (% of Impacted Circuit Wavelength Services and applicable Local Access MRC)**
< = 60 days	0
61-120 days	50% (based on 1 month MRC)
121+days	100% (based on 1 month MRC). Termination Liability will be waived if Customer opts to cancel service after 121+ days.

5.6   TTR Credits

During any monthly billing period in which Verizon fails to meet the Service Availability standard or TTR standard for a specific Customer circuit, and provided the conditions set forth in this SLA have been met, Customer is eligible to receive a credit applied against the MRC for that circuit, as follows. Access and backhaul charges are excluded from the Wave, credit calculations and are not considered eligible for a credit:

5.6.1   For failure to meet the TTR standard for one month, Verizon will provide, as applicable, a credit equal to 25 percent of the MRC for that circuit, after application of all discounts.

5.6.2   For failure to meet the TTR standard for the same circuit for two consecutive months, Verizon will provide, as applicable, a credit equal to 50 percent of the MRC for that circuit, after application of all discounts, for the second month.

5.6.3   For failure to meet the TTR standard for the same circuit for three consecutive months, either: (1) Verizon will provide a credit equal to 100 percent of the MRC for that circuit, after application of all discounts, for the third month and for each consecutive month thereafter that Customer remains subscribed to the circuit and Verizon fails to satisfy the TTR standard; or (2) Customer may terminate service for that circuit without incurring termination liability, except for charges incurred prior to service termination, if Customer notifies Verizon in writing of its intent to terminate the circuit no later than 30 days after the conclusion of the third month or any consecutive month in which the same Service Level Standard is not met for that circuit. After a failure of three consecutive months or more, Verizon, upon written notice to Customer, may terminate its performance obligations under this SLA.

5.6.4   If the Hard Outage carries over from one month to the next, the Hard Outage is deemed to have occurred in the month in which the Wave circuit was restored.

5.6.5   In addition, Verizon will not issue credits pursuant to this SLA for more than a total of six months in any 12-month period.

6.   Exclusions.

6.1   In addition to any of the exclusions specified above, Customer will not be eligible for any credits if the unavailability or RTD is a result of any of the following:

6.2   Wavelength Services that have been installed for less than one full calendar month;

6.3   Any act or omission on the part of Customer, its contractors, vendors, agents or any other entity over which Customer exercises control or has the right to exercise control,

other than acts or omissions of Verizon or Verizon approved third party network or maintenance providers, including, but not limited to, the following:

6.3.1   Delays of any kind attributable to Customer;

6.3.2   Incorrect or incomplete information provided by Customer;

6.3.3   Customer Premises Equipment (CPE)

6.3.4   Periods during which Verizon or the Verizon-approved maintenance provider is denied access to the CPE or network components at the Customer Site when such access is required;

6.3.5   Customer's failure or refusal to release the circuit for testing;

6.3.6   Customer's unavailability when needed to close a Trouble Ticket;

6.3.7   CPAs;

6.3.8   The manner in which Customer has used the circuit, including, but not limited to router configuration, power availability and environmental conditions prevailing at Customer's Site;

6.3.9   Any third party equipment other than equipment furnished by LECs as part of the access services provisioned by Verizon via LEC facilities.

6.3.10   Interruptions not reported by Customer, or for which no Trouble Ticket was opened, if required under Section III above;

6.3.11   Proper electrical power is not available;

6.3.12   A Force Majeure Event;

6.3.13   Scheduled maintenance by Customer or entities under Customer's direction or control;

6.3.14   Scheduled or emergency maintenance by Verizon;

6.3.15   Customer's use of the Wavelength Services in an unauthorized or unlawful manner;

6.3.16   Temporary Network degradation, such as slow data transmission for circuit unavailability;

6.3.17   Service outages attributable to installation of a new circuit;

6.3.18   Delays resulting from order suspension due to credit issues involving Customer.

6.3.19   Outage minutes resulting from testing RTD will not be considered for Hard Outage SLAs.

6.3.20   Fiber cuts, outages or faults that require planned or unplanned maintenance on submarine cable or plant.

Virtual Network Services + Service Level Agreement

1. Overview

This Service Level Agreement applies to Virtual Network Services (VNS). There are three management levels, each with different SLAs. The SLAs for each management level is provided separately in this Service Level Agreement.

a) Full Management Service Level - Under Full Management, Verizon manages the Virtual Network Function(s) (VNF) and supporting infrastructure. The SLA applies to each VNF subscribed to by Customer under VNS. The VNFs are Routing, SD WAN, Security, and WAN Optimization. Full Management SLA provides for Availability, Time to Repair, Installation, and Proactive Outage Notification Service Level Agreements for the VNF.

b) Co Management Service Level – Under Co Management, Verizon manages the VNFs and supporting infrastructure, however Customer can manage select set of SD WAN policies through the VEC or API Gateway. The SLA applies to SD WAN VNFs subscribed to by Customer under VNS. Co Management SLA provides for Availability, Time to Repair, Installation and Proactive Outage Notification Service Level Agreements for the VNF.

c) Monitor Management Service Level - Under Monitor Management, Verizon does not manage the VNFs but provides for management of the VNF host (uCPE or Verizon's Hosted Network Service (HNS)), notification of VNF outages, and recovery of VNFs. Monitor Management SLA provides for Availability and TTR of the uCPE or HNS, Installation for uCPE and Proactive Outage Notification of VNF, uCPE, and HNS platform failures.

This VNS SLA is in addition to Verizon provided Network Services SLAs.

Variances in SLA

The Virtual Network Services SLAs vary by geographic location and network provider.

Variances by Geographic Location. The location of a Customer Site determines the applicable service levels. The countries covered under the Virtual Network Services SLA are divided into three categories:

- U.S. – Contiguous 48 states and Hawaii with Verizon Networks
- Global Tier A locations with Verizon Networks

Europe	Asia Pacific	Americas
Austria	Australia	Alaska
Belgium	Hong Kong	Canada
Denmark	China	Argentina
Finland	Japan	Brazil
France	Singapore	Chile
Germany	South Korea	Colombia
Ireland		Mexico
Italy		Panama
Luxembourg		Peru
Netherlands		Puerto Rico
Norway		Venezuela
Spain		
Sweden		
Switzerland		
United Kingdom		

- Global Tier B – the countries with Verizon Networks that are not in the U.S. or Global Tier A locations

  Customer must also have a Verizon provided circuit (LTE, Private IP, or Verizon Internet) for management, the ability to conduct changes, and for restoration.

  In summary, Customer may have Verizon or approved U.S. 3rd Party Networks as primary or backup service to a Site but must have a Verizon provided circuit for management.

2. **Service Level Agreement for Full Management**

Under Full Management, Verizon manages the Virtual Network Function.

A VNF is defined as the Virtual Network Function servicing a specific Customer Site. There may be one or more VNF's servicing a specific Customer location. Each VNF is covered by this SLA.

Availability of the Virtual Network Function(s) is affected by supporting components provided by Verizon: Network, host platform (on premises server uCPE or Verizon's Hosted Network Service) and VNF software.

Failures of any of these components affect the availability of one or more of the VNF's to service a specific Customer Site. Verizon agrees to deliver service levels for each VNF and maintains and restores those components to meet those service levels.

The following are the Service Levels for Full Management:

Full Management				
Parameter	U.S. Verizon Network	Global Tier A Verizon Network	Global Tier B Verizon Network	U.S. 3rd Party Approved Networks
Availability with Dual circuits and dual VNF Backup	100%	100%	100%	100%
Availability with dual VNF and single	99.95%	99.95%	99.95%	99.95%
Availability No VNF	99.5%	99.5%	99.0%	99.5%
TTR	3.5 Hours	4 Hours	6 Hours	4 Hours
VNF Installation (Excludes Network	45 Calendar days (Excludes Hawaii)	Not Available	Not Available	Not Available
Proactive Outage Notification	15 Minutes	15 Minutes	15 Minutes	15 Minutes

The following are the definitions of back up:
    No VNF backup – Customer Site where the VNF has a single network circuit with no network service backup and no uCPE or HNS backup.

    Single VNF backup –Customer Site where the VNF has a single uCPE or HNS, a

primary network, service and backup network service (redundant circuit, Verizon provided cellular, DSL, or other backup through diverse circuits).

Dual VNF Backup—Customer Site where there are two uCPE or HNS hosts each with the VNF, a primary network, service and backup network service (redundant circuit, Verizon provided cellular, DSL, or other backup through diverse circuits)

For Availability and Time to Repair SLA metrics, the SLA excludes the amount of time that:
-Verizon is awaiting feedback or an approved maintenance window from Customer.
-The Trouble Ticket status is 'On Hold' status as requested by Customer
-The problem is caused by a software bug for which no workaround or patch is available.

Verizon monitors the stability of the service after an incident is perceived to be resolved.

The SLA clock will resume when the Customer permits repairs to continue or when Verizon receives feedback from the vendor or manufacturer on a software or configuration problem.

Full Management Availability SLA.

Full Management availability is based on the Virtual Network Function availability. Availability is based on the total number of minutes in a calendar month during which the VNF serving a Customer Site is available divided by the total number of minutes in that month. VNFs are considered available when they are performing the intended function (routing, optimization, etc.).

Calculation of Full Management Availability

Availability is the percentage of time that the Customer's VNF is available within a given calendar month. Availability applies to the ability of the VNF to perform its function. Total loss of the ability for the VNF to perform its function is considered a Hard Outage and results in a Priority One Ticket. Total Failure of VNF associated Network, uCPE or HNS, or VNF Software will constitute a Hard Outage and result in a Priority One Ticket.

The following hierarchy provides the relationship of components to the VNF:

The failure of the network supporting the Customer Site will be treated as a failure of all VNF's supporting the Customer Site, and the time associated with such network failure will be tracked for availability and TTR for each VNF serving the Customer Site.

The failure of uCPE or HNS supporting the Customer Site will be treated as a failure of all VNF's on the affected uCPE or HNS supporting the Customer Site. The time associated with such uCPE or HNS failure will be tracked for availability and TTR for each affected VNF.

The failure of a VNF itself, when the network and uCPE/HNS remain operational, will be tracked and time associated with such failure will be used in computations for availability and TTR metric.

Full Management Availability Calculation

The calculation of monthly VNF Availability (%) =1 - (Total minutes of Customer Site Hard Outage per month) X 100% / # days in month x 24 hours x 60 minutes.

Full Management Availability SLA Credit Structure and Amounts

Customers will be credited for Virtual Network Services monthly recurring charges for the VNF(s) experiencing a Hard Outage. Credits are applied based upon back up services for the VNF as follows:

Full Management Availability with Dual VNF Backup Credit as a % of Affected VNF MRC				
VNF Availability	U.S. Verizon Network	Global Tier A Verizon Network	Global Tier B Verizon Network	U.S. Approved 3rd Party Networks
From / To				
100%-99.90%	10%	10%	10%	10%
99.89%-99.50%	15%	15%	15%	15%
99.49%-99.00%	20%	20%	20%	20%
98.99%-98.00%	30%	30%	30%	30%
97.99%-97.00%	50%	50%	50%	50%
Less than 97%	100%	100%	100%	100%

Full Management Availability with Single VNF Backup Credit as a % of Affected VNF MRC				
VNF Availability	U.S. Verizon Network	Global Tier A Verizon Network	Global Tier B Verizon Network	U.S. Approved 3rd Party Networks
From / To				
100%-99.95%	N/A	N/A	N/A	N/A
99.94%-99.50%	5%	5%	5%	5%
99.49%-99.00%	10%	10%	10%	10%
98.99%-98.00%	15%	15%	15%	15%
97.99%-96.00%	25%	25%	25%	25%
95.99%-94.00%	50%	50%	50%	50%
Less than 94.00%	100%	100%	100%	100%

Full Management Availability with No VNF Backup Credit as a % of VNF MRC				
VNF Availability	U.S. Verizon Network	Global Tier A Verizon Network	Global Tier B Verizon Network	U.S. Approved 3rd Party Networks
From / To				
100%-99.5%	N/A	N/A	N/A	N/A
99.49%-99.00%	10%	5%	0%	5%
98.99%-97.00%	15%	15%	10%	15%
96.99%-95.00%	25%	20%	15%	20%
94.99%-93.00%	35%	25%	20%	25%
92.99%-90.00%	50%	30%	25%	30%
Less than 90%	100%	100%	100%	100%

Full Management Time to Repair (TTR).

TTR is the time to resolve a Hard Outage Trouble Ticket for the affected VNF(s)

Calculation of Full Management Time to Repair (TTR)

The Customer's TTR will be based on the Priority One (Hard Outage) time per VNF for each outage event. The TTR time starts when a Trouble Ticket is opened as a Priority One (Hard Outage) by Verizon or the Customer and concludes with the restoration of VNF. VNF Time To Repair (Hrs.) = Length of Trouble Ticket resolution for Priority One Ticket (Hard Outage per VNF).

Full Management Level TTR Credit Structure and Amounts

Customers will be credited for Virtual Network Services MRC for the affect VNF

Full Management Time to Repair Credit as a % of Affected VNF MRC				
Hard Outage Repair Time (Per Incident)	U.S. Verizon Network	Global Tier A Verizon Network	Global Tier B Verizon Network	U.S. Approved 3rd Party Networks
Less than 3.5 Hours	NA	NA	NA	NA
3:30:00-3:59:00 Hours	5%	NA	NA	NA
4:00:00-5:59:00 Hours	10%	5%	NA	5%
6 Hours Plus	15%	10%	5%	10%

Full Management Installation SLA.

The Virtual Network Services Installation SLA is defined as the period of time to install the VNF(s) at a Customer Site.

The installation SLA relates to the interval of time from order is placement and VNF availability for service to the Customer Site, defined by the date of Customer Site Acceptance. The installation is dependent upon the installation of the uCPE or HNS, and the VNF software. For Customer Sites with no existing network service, the VNS installation SLA starts when the network service is available.

Full Management Installation SLA Calculation

The Virtual Network Services Installation SLA time period starts the date the VNF order is placed and ends the date the Virtual Network Services function(s) is up and serving the Customer Site and the service is billable.

Credit Structure and Amounts for Full Installation SLA

Customer will receive a 50% refund of the non-recurring VNF installation fee for a Customer Site if Verizon fails to install Virtual Network Services service within 45 business days for that Customer Site for U.S. installations.

Full Management Installation SLA Exclusions

In addition to the general exclusions found in Appendix A, the following exclusions apply to the Virtual Network Services Installation SLA:

> -Orders expedited by Customer; Installations outside of the 48 contiguous United States or circuits terminating outside of the 48 contiguous United States;

-Delays resulting from an order suspension due to Customer credit issues;

Full Management Proactive Outage Notification SLA.

The proactive outage notification SLA provides credits if Verizon fails to notify Customer of a Hard Outage (Priority One Trouble Ticket) by electronic means (e.g. pager or e-mail).

Full Management Proactive Notification SLA Calculation

The Notification Period begins with opening of a Trouble Ticket (Priority One) for a Hard Outage. Verizon has 15 minutes to notify Customer's primary point of contact from the start point of the Notification Period. Verizon is in compliance with the proactive outage notification SLA if the Customer opened the Trouble Ticket or contacts Verizon within the Notification Period. Verizon will provide the Trouble Ticket number and an initial status.

Full Management Proactive Notification Credit Structure and Amounts

Customer will receive a credit equal to 10% of the monthly recurring charge for each VNF that was impacted during a Hard Outage that was not properly notified.

Full Management Level Proactive Outage Notification SLA Exclusions

In addition to the general exclusions found in Appendix A, the following exclusions apply to the Proactive Outage Notification SLA:

-Periods of Soft Outage

- Events that affect multiple customers including without limitation cable or fiber cuts.

-Customer point of contact unavailability due to incorrect contact information or other cause.

3. Service Level Agreement for Co Management

All the service level attributes discussed in section above for Full Management are applicable except for the following additions / exclusions.

1. TTR SLA exclusion – Hard Outages on SD WAN link(s) due to policy changes made by Customer will be deemed Customer Time. Verizon is not responsible to remediate such changes and would advise Customer to revert policy changes made.

2. Notification of Outage or Performance Degradation – Verizon will notify Customer of any outage or degradation in performance metrics (SLA, Latency, Packet Loss) that happened due to Customer policy changes. Verizon is not responsible to remediate such changes and would advise Customer to revert policy changes made. Notifications are available for Verizon managed circuits only.

4. Service Level Agreement for Monitor Management Level Standard

Monitor Management Level- Verizon fully manages the uCPE or HNS, and provides Availability, TTR, and Proactive Notification SLA's for uCPE or HNS outages. The Monitor Management Level also provides Proactive Notification of VNF outages. VNF management in the Monitor Management Level is the responsibility of the Customer.

Under the Monitor Management Level, upon request only, Verizon will recover a VNF with a Monitor Management Level to a standard default configuration. In all cases, any special configurations or other changes from the default configuration are the responsibility of the Customer.

Verizon limits the number of recoveries without incurring additional charges to two times a year per VNF service.

Monitor Management Level SLA				
Parameter	U.S. Verizon Network	Global Tier A Verizon Network	Global Tier B Verizon Network	U.S. 3rd Party Approved Networks
uCPE and HNS Availability with uCPE/HNS Backup (Percent of Time that at least one uCPE HNS will be in	100%	100%	100%	100%
Availability with no uCPE/HNS Backup	99.5%	99.5%	99.0%	99.5%
TTR of uCPE/HNS	3.5 Hours	4 Hours	6 Hours	4 Hours
uCPE Installations (Excludes Network	45 days (Excludes Hawaii)	Not Available	Hot Available	Not Available
Proactive uCPE, HNS or VNF Outage	15 Minutes	15 Minutes	15 Minutes	15 Minutes

Availability means the uCPE or HNS is powered and is processing the VNF application.

Processing errors that do not affect the function do not detract from availability. uCPE and HNS Availability is based on the total number of minutes in a calendar month during which the uCPE or HNS serving a Customer Site is available divided by the total number of minutes in that month.

The calculation of monthly uCPE or HNS Availability (%) =1 - (Total minutes of Customer Site Hard Outage per month) X 100% / # days in month x 24 hours x 60 minutes

Monitor Management uCPE and HNS Availability with uCPE Backup Credit as a % of Affected uCPE MRC				
Availability	U.S. Verizon Network	Global Tier A Verizon Networks	Global Tier B Verizon Networks	U.S. Approved 3rd Party Networks
From / To				
100%-99.90%	10%	10%	10%	10%
99.89%-99.50%	15%	15%	15%	15%
99.49%-99.00%	20%	20%	20%	20%

Monitor Management uCPE and HNS Availability with uCPE Backup Credit as a % of Affected uCPE MRC				
Availability	U.S. Verizon Network	Global Tier A Verizon Networks	Global Tier B Verizon Networks	U.S. Approved 3rd Party Networks
98.99%-98.00%	30%	30%	30%	30%
97.99%-97.00%	50%	50%	50%	50%
Less than 97%	100%	100%	100%	100%

Monitor Management Level uCPE Availability with No uCPE Backup Credit as a % of Affected uCPE MRC				
Availability	U.S. Verizon Networks	Global Tier A Verizon Networks	Global Tier B Verizon Networks	U.S. Approved 3rd Party Networks
From / To				
100%-99.5%	N/A	N/A	N/A	N/A
99.49%-99.00%	10%	5%	0%	5%
98.99%-97.00%	15%	15%	10%	15%
96.99%-95.00%	25%	20%	15%	20%
94.99%-93.00%	35%	25%	20%	25%
92.99%-90.00%	50%	30%	25%	30%
Less than 90%	100%	100%	100%	100%

Monitor Management Level uCPE and HNS Platform Time to Repair Credit as a % of MRC				
Hard Outage Repair Time (Per Incident	US Verizon Network	Global Tier A Verizon	Global Tier B Verizon	U.S. 3rd Party Networks
Less than 3.5 Hours	NA	NA	NA	NA
3:30:00-3:59:00 Hours	5%	NA	NA	NA
4:00:00-5:59:00 Hours	10%	5%	NA	5%
6 Hours Plus	15%	10%	5%	10%

Monitor Management Level Time to Repair (TTR) SLA. TTR is the time to resolve a Hard Outage (Priority One) Trouble Ticket for the affected uCPE or HNS. Note: In the Monitor Management Level, Verizon will take action on uCPE and HNS outages. Customer is responsible for VNF Outages.

Monitor Management Level TTR SLA Calculation. The Customer's TTR will be based on the Priority One (Hard Outage) time per uCPE for each outage event. The TTR time starts when a Trouble Ticket is opened as a Priority One (a Hard Outage) by Verizon or the Customer and concludes with the restoration of uCPE. uCPE Time To Repair (Hrs.) = Length of Trouble Ticket resolution for Priority One Ticket (Hard Outage per VNF).

Monitor Management Level Proactive Outage Notification SLA.

The proactive outage notification SLA provides credits if Verizon fails to notify Customer of a Hard Outage of the uCPE, HNS platform, or VNF by electronic means (e.g. pager or e-mail).

Monitor Management Level Proactive Notification Calculation

The Notification Period begins with opening of a Trouble Ticket for a Hard Outage. Verizon has 15 minutes to notify Customer's primary point of contact from the start point of the Notification Period. Verizon is in compliance with the proactive outage notification SLA if the Customer opened the Trouble Ticket or contacts Verizon within the Notification Period. Verizon will provide the Trouble Ticket number and an initial status.

Monitor Management Level Proactive Notification SLA Credit Structure and Amounts

Customer will receive a credit equal to 10% of the monthly recurring charge for each Virtual uCPE or HNS that incurred a Hard Outage and the Customer was not properly notified.

4.1 Virtual Network Services SLA Credit Application Structure and Process for Full, Co Management and Monitor Levels of Service

Credits are not cumulative month to month. If the SLA issue exceeds 30 days, the same schedule applies for each consecutive month. Credits are provided for each VNF serving the Customer Site and there in no maximum credit within each month. Verizon's data and calculations will be used to determine if an SLA has been missed and a credit is due. Verizon will issue a credit within 90 days if its determination of non-compliance with an SLA. Credits are available in accordance with this SLA, but credits are not available for more than the Full value of any one affected MRC or the sum of the value all affected MRC's.

Process for Customers to Apply for SLA Credits

Customer completes two steps in order to have an outage qualify for a Service Level Agreement credit. First, except for the Installation SLA, a Trouble Ticket needs to be opened in response to Virtual Network Services issues at the time of the Virtual Network Services issue. Second, a written request for credit must be made to the account team contact.

Opening a Trouble Ticket for the Availability, Time to Repair, and Proactive Outage Notification SLAs

A Priority One (Hard Outage) Trouble Ticket must be opened on Verizon's systems, either by Verizon or by Customer's request. A Trouble Ticket provides the record of Hard Outage events. Submitting a Service Level Agreement Credit Request

Installation SLA Credit Requests

Customer must make a written request (e-mail or fax) to the Verizon Account Team for a credit within 15 days after the date that the installation is completed that is beyond the 45 business day SLA with the following information:

- The Customer Site.

- The circuit identifier.

- The VNF.

- The date the VNF should have been installed.
- The date the VNF was installed.

- The date that the Customer order was approved.

Requests for Credits for Availability, Time To Repair, and Proactive Outage Notification SLA. Customer must make a request in writing (e-mail or fax) to the Verizon Account Team for a credit within 15 days of the end of the month for which an SLA credit is due with the following information:

- The date the applicable outage(s) occurred.

- The time the outage(s) began and ended.

- The Customer Site(s) and circuit ID(s) for each affected Customer Site.

- Trouble Ticket number for each event.

Service Level Agreement Credit Time Limitation

If Verizon has failed to meet the same SLA for three consecutive months, Customer may elect to:

-continue Virtual Network Services with a limit of six months of credits for any individual SLA within a 12-month period.

-discontinue Virtual Network Services, at one, multiple, or all Customer Sites without liability except for charges incurred prior to discontinuation of Virtual Network Services.

Customer must submit a written disconnect notice to their Verizon Account Team within 30 days following the end of either the third or subsequent consecutive month of Verizon's failure to meet the SLA.

If 3rd Party Network provider causes in whole or in part the payout of SLA credits for three (3) consecutive months, Verizon has the following options:

-require a change of 3rd Party Network provider, as applicable.

- terminate its performance obligations under this Virtual Network Services SLA for the relevant SLA for Customer Sites with 3rd Party Network provider.

Appendix A General Exclusions

The following exclusions apply to all Service Level Agreements contained in this document:

No credit will be due to the extent the SLA is not met because of any act or omission on the part of the Customer, its contractors or vendors, or any other entity over which the Customer exercises control or has the right to exercise control, other than acts or omissions of Verizon approved 3rd Party Network.

No credit will be due to the extent the SLA is not met because of a Force Majeure event, as defined in the Agreement.

No credit will be due to the extent the SLA is not met because of scheduled maintenance by Customer or entities under Customer's direction or control.

No credit will be due to the extent the SLA is not met because of scheduled maintenance by Verizon within Verizon's maintenance windows.

No credit will be due to the extent the SLA is not met because of the amount of time delays due to Customer Time.

No credit will be due to the extent the SLA is not met because proper power is not available to the uCPE. No credit will be due because of a failure caused by lack of environmental protection at the Customer premises that results in exposure of the uCPE to moisture, heat, or other damaging conditions.

Any SLAs related to uCPE without out-of-band access.

No credit will be due for which there is no Trouble Ticket opened.

No credit will be due for VNFs which have been installed for less than one Full calendar month.

Appendix B: Terms and Definitions

Circuit - A "circuit" is a connection and Local Access.

Connection - A "connection" is a port on Customer's WAN connected to Verizon or a 3rd Party Network.

Customer Provided Access-Customer remits payment for Local Access directly to their Local Access provider and Verizon does not invoice Customer for Local Access charges.
Customer Site-A site is Customer's Virtual Network Services location serviced by the VNF.

Customer Time-Time delays attributable to or caused by one or more of the following:

    a) Incorrect or incomplete information provided by Customer.

    b) Verizon being denied access to uCPE or network components at the Customer location when access is required.

    c) Failure or refusal by Customer to release the circuit for testing.

    d) Customer unavailability where needed to close a Trouble Ticket.

    e) Delays attributable to Customer management of the VNF to include Customer policies as sources of issues.

Hard Outage- VNF degradation such that Customer is unable to use VNF and Customer is prepared to release the circuit to Verizon for immediate testing.

HNS -- Hosted Network Service, Verizon's network platform capable of hosting VNF software to deliver routing, security, SD WAN, or WAN Optimization services.

Local Access- The portion of service between Customer's premises and a Verizon designated point-of- presence.

Soft Outage- Virtual Network Services Service degradation such that Customer is still able to use the Virtual Network Services Service and Customer is NOT prepared to release the circuit to Verizon for immediate testing.

Trouble Ticket-The result of reporting by a Customer to Verizon of either perceived Virtual Network Services outage or Virtual Network Services degradation.

uCPE - Universal CPE, a server or module located at the Customer Site capable of hosting VNF software to deliver routing, security, SD WAN, or WAN Optimization services.

U.S. 3rd Party Networks – Customer Provided Access or transport, serving a Customer Site or the Customer's entire network, from
U.S. third parties, whether directly contracted by Customers with the providers or contracted through Verizon. Such U.S. 3rd Party Networks must be approved by Verizon. There is no provision for non-U.S. third party networks.

Verizon Networks- Verizon Networks in this SLA applicable to VNS are Verizon Private IP, Verizon Internet Dedicated, Ethernet LAN, Ethernet Line, LTE Wireless, Private LTE, and Verizon provided Broadband services.

SOHO Services SLAs

Verizon's SOHO Services include the following SLAs:

- Managed WAN – Provided on the pages that follow

- Data Services, which include:

  - Private IP (MPLS) – See SLA under Data Services

  - Internet Dedicated -- See SLA under Data Services

  - Managed Wireless LAN – Provided on the pages that follow

Managed WAN Service Level Agreement

1. Overview

1.1 This Managed Wide Area Network (Managed WAN) SLA is in addition to the SLA's offered for Verizon Private IP (PIP), Private Line (PL) PIP Layer 2 Service, Ethernet E-LAN and E-Line Services, Ethernet Private Line (EPL), Ethernet Virtual Private Line Service (EVPL) CPA-Based, and Virtual Private LAN Service (VPLS) and Verizon- approved Internet Dedicated Access and Internet Dedicated Ethernet transport services and relates to Verizon's performance providing Managed WAN. Terms not defined in Appendix B: Terms and Definitions – not defined in Appendix B below are defined in the Agreement.

1.2 For contracts governed by German or Austrian Law, this SLA, including any Service Credits for breach of quality parameters, is an independent commercial agreement. The quality parameters detailed in this SLA are neither implied warranties of the quality of Managed WAN Service (Beschaffenheitsvereinbarungen) nor guarantees under the German or Austrian Civil Code (BGB or ABGB). Service Credits paid under this SLA will be set-off against any potential damage compensation payments.

1.3 SLAs and Service Objectives:

The Managed WAN SLAs are as follows:
Availability
Time to Repair
(TTR) Managed
WAN Installation
Proactive
Outage
Notification

The Managed WAN Service objectives are:
Change Management
Managed WAN Physical TTR (other than Verizon Network circuits)

2. SLA Details

2.1 Coverage Categories

The Managed WAN SLAs vary by level of Managed WAN service, network provider, geographic location and maintenance provider as defined below.

2.1.1 Geographic Location. The location of a Customer Site determines the applicable service levels. The countries covered under the Managed WAN SLA are divided into three categories:

1. U.S. – Contiguous 48 states and Hawaii
2. Global Tier A

Europe	Asia Pacific	Americas
Austria	Australia	Alaska
Belgium	Hong Kong	Canada
Denmark	China	Argentina
Finland	Japan	Brazil
France	Singapore	Chile
Germany	South Korea	Colombia
Ireland		Mexico
Italy		Panama

Europe	Asia Pacific	Americas
Luxembourg		Peru
Netherlands		Puerto Rico
Norway		Venezuela
Spain		
Sweden		
Switzerland		
United Kingdom		

3. Global Tier B – the countries where Verizon provides Managed WAN that are not in the U.S or Global Tier A.

2.1.2   Network Provider. The network provider for primary access also determines the applicable service levels. All SLAs provided herein are for the Verizon Network except where noted. The networks covered under the Managed WAN SLA are divided into three categories:

1. Verizon Network – PIP or PL provided by MCI Legacy Companies, PIP Layer 2 Service, Ethernet Private Line (EPL), Ethernet E-LAN and E-Line, Ethernet Virtual Private Line Service (EVPL) CPA-Based, Virtual Private LAN Service (VPLS), and Verizon-approved Internet Dedicated Access and Internet Dedicated Ethernet transport services.
2. Other Verizon Networks – Verizon IP VPN as referenced in Verizon Tariff F.C.C. No. 20, Verizon Local Private Line as referenced in Verizon Tariff F.C.C. No. 1 and F.C.C No. 11, Verizon Internet Broadband Services, Verizon Cellular Wireless Access.
3. 3rd Party Network – Customer Provided Access or transport from third parties approved by Verizon from time to time. The current approved 3rd Party Network providers are AT&T, Sprint, BellSouth, CenturyLink, Equant, British Telecom, Deutsche Telekom, and NTT.

2.1.3   Maintenance Provider. Customer may have Verizon Care or maintenance by an approved Customer or Verizon contracted 3rd party maintenance provider. The current approved 3rd party maintenance providers are IBM, Siemens, Cisco, HP, NCR, and Unisys. For SLA metrics that vary by maintenance provider, Customer will get the same SLA for Verizon contracted 3rd party maintenance providers as for Verizon Care. As used in this SLA, "3rd Party Maintenance" means Customer contracted 3rd party maintenance.

3.   Managed WAN SLA

3.1   Service Level Agreements and Objectives by Country Category and Level of Managed

WAN Service Table 3.1.1 Managed WAN Full or Co Management Service Level

Agreements

Region				
Parameter	U.S.: Verizon Network only	Global Tier A All Networks	Global Tier B All Networks	U.S.: Other Verizon Networks & 3rd Party Network
Availability with: Dual Managed Devices / Dual circuits and Out of Band (OOB) Access, or Alternate Circuit with Dual Managed Devices, or Backup Wireless via a Console Connection	100%	100%	100%	100%

Region				
Parameter	U.S.: Verizon Network only	Global Tier A All Networks	Global Tier B All Networks	U.S.: Other Verizon Networks & 3rd Party Network
Availability with: Single Managed Device Back-up and OOB Access, or Alternate Circuit with single router, or Backup Wireless via Inline Management	99.95%	99.95%	99.95%	99.95%
Availability without: Back-up or OOB Access	99.5%	99.5%	99.0%	99.5%
TTR – Verizon Care with: OOB Access or Alternate Circuit with single router or Dual Managed Devices, or	3.5 Hours	4 Hours	6 Hours	4 Hours

Region				
Parameter	U.S.: Verizon Network only	Global Tier A All Networks	Global Tier B All Networks	U.S.: Other Verizon Networks & 3rd Party Network
Backup Wireless via Inline Management or a Console Connection				
TTR – 3rd Party Maintenance with: OOB Access or Alternate Circuit with single router or Dual Managed Devices, or Backup Wireless via Inline Management or a Console Connection	6 Hours	6 Hours	6 Hours	6 Hours
TTR without: Backup or OOB Access	16 Hours	16 Hours	16 Hours	16 Hours
TTR – Verizon Care- or 3rd Party Maintenance on Cloud-Controlled Routing	Next Business Day	Next Business Day	Next Business Day	Next Business Day
Managed WAN Installation	45 Business Days (Hawaii excluded)	Not Available	Not Available	Not Available
Proactive Outage Notification	15 Minutes	15 Minutes	15 Minutes	15 Minutes

TABLE 3.1.2 MANAGED WAN PHYSICAL SERVICE LEVEL AGREEMENT

Region				
Parameter	U.S.: Verizon Network only	Global Tier A Verizon Network Only	Global Tier B Verizon Network Only	U.S.: Other Verizon Networks & 3rd Party Network
TTR – Verizon Network Circuit Issues Only	3.5 Hours	4 Hours	6 Hours	N/A
Region				
Parameter	All Networks, All Regions, All Maintenance Providers			

Proactive Outage Notification	15 Minutes

TABLE 3.1.3 MANAGED WAN PHYSICAL SERVICE LEVEL OBJECTIVES

Region				
Parameter	U.S.: Verizon Network only	Global Tier A Other Verizon Networks & 3rd Party Network	Global Tier B Other Verizon Networks & 3rd Party Network	U.S.: Other Verizon Networks & 3rd Party Network
TTR –3rd Party Network and Other Verizon Networks with: OOB Access, or Alternate Circuit with Dual Managed Devices, or Backup Wireless via a Console Connection (Physical issues only)	N/A	4 Hours	6 Hours	4 Hours
TTR –Verizon Care with:	3.5 Hours	4 Hours	6 Hours	4 Hours
Region				
Parameter	U.S.: Verizon Network only	Global Tier A Other Verizon Networks & 3rd Party Network	Global Tier B Other Verizon Networks & 3rd Party Network	U.S.: Other Verizon Networks & 3rd Party Network
OOB Access, or Alternate Circuit with single router or Dual Managed Devices, or Backup Wireless via Inline Management or a Console Connection (Physical issues only)				
TTR –3rd Party Maintenance with: OOB Access, or Alternate Circuit with single router or Dual Managed Devices, or Backup Wireless via Inline Management or a Console Connection (Physical issues only)	6 Hours	6 Hours	6 Hours	6 Hours
TTR without OOB Access	16 Hours	16 Hours	16 Hours	16 Hours
TTR - Verizon-provided or 3rd Party Maintenance on Cloud-Controlled Routing (Physical issues only)	Next Business Day	Next Business Day	Next Business Day	Next Business Day

TABLE 3.1.4 MANAGED WAN MONITOR AND NOTIFY SERVICE LEVEL AGREEMENT

	Region			
Parameter	U.S.: Verizon Network only	Global Tier A Verizon Network Only	Global Tier B Verizon Network Only	U.S.: Other Verizon Networks & 3rd Party Network
TTR – Verizon Network Circuit Issues only	3.5 Hours	4 Hours	6 Hours	N/A
	Region			
Parameter	All Networks, All Regions, All Maintenance Providers			
Proactive Outage Notification	15 Minutes			

4. Service Level Agreements and Objectives Defined

4.1 Availability. Customer Site Availability is based on the total number of minutes in a calendar month during which the Customer Site is available to exchange data between all Managed WAN sites, divided by the total number of minutes in that month. Sites are considered available whether data is passing through the primary connection or through a backup connection. Availability is based on the total number of minutes per calendar month and site design:

- No backup – Measures the site availability for sites that have no backup circuit of any kind.
- Single Managed Device backup – Measures the site availability for sites that have Verizon-provided Cellular Wireless Access, or Verizon-provided or Customer-provided broadband, DSL, or other backup through diverse circuits.
- Dual Managed Device, dual circuit backup – Measures the site availability for sites that have two connected Verizon Managed Devices running hot standby routing protocol (HSRP) or equivalent protocol each with a separate, diverse circuit, one Managed Device with a primary circuit, and the other Managed Device with a diverse circuit.

4.1.1 Calculation
Availability is the percentage of time that the Customer's site is available within a given calendar month. Availability only applies to Hard Outages.

Monthly Customer Site Availability (%) =

$$1 - \left(\frac{\text{Total minutes of site Hard Outage per month}}{\text{\# days in month x 24 hours x 60 min}} \right) \times 100$$

4.1.2 Credit Structure and Amounts
Customers will be credited for Managed WAN monthly recurring charges for the affected site with the Full or Co Management level of service.

TABLE 4.1.2.1 AVAILABILITY WITH: DUAL MANAGED DEVICES / DUAL CIRCUITS AND OOB ACCESS, OR ALTERNATE CIRCUIT WITH DUAL MANAGED DEVICES, OR BACKUP WIRELESS VIA A CONSOLE CONNECTION
(APPLIES TO SITE LEVEL PERFORMANCE)

Credit as a % of Managed WAN MRC					
Managed Device to Managed Device Availability %		U.S.: Verizon Network only	Global Tier A All Networks	Global Tier B All Networks	U.S.: Other Verizon Networks & 3rd Party Network
From	To				
< 100%	99.90%	10%	10%	10%	10%
99.89%	99.50%	15%	15%	15%	15%
99.49%	99.00%	20%	20%	20%	20%
98.99%	98.00%	30%	30%	30%	30%
97.99%	97.00%	50%	50%	50%	50%
Less than 97.00%		100%	100%	100%	100%

TABLE 4.1.2.2 AVAILABILITY WITH SINGLE MANAGED DEVICE BACK-UP AND OOB ACCESS, OR ALTERNATE CIRCUIT WITH SINGLE ROUTER, OR BACKUP WIRELESS VIA INLINE MANAGEMENT
(APPLIES TO SITE LEVEL PERFORMANCE)

Credit as a % of Managed WAN MRC					
Managed Device to Managed Device Availability %		U.S.: Verizon Network only	Global Tier A All Networks	Global Tier B All Networks	U.S.: Other Verizon Networks & 3rd Party Network
From	To				
100%	99.95%	N/A	N/A	N/A	N/A
99.949%	99.90%	5%	5%	5%	5%
99.89%	99.00%	10%	10%	10%	10%
98.99%	98.00%	15%	15%	15%	15%
97.99%	96.00%	25%	25%	25%	25%
95.99%	94.00%	50%	50%	50%	50%
Less than 94.00%		100%	100%	100%	100%

TABLE 4.1.2.3 AVAILABILITY WITHOUT BACK-UP OR OOB ACCESS (APPLIES TO SITE LEVEL PERFORMANCE)

Credit as a % of Managed WAN MRC					
Managed Device to Managed Device Availability %		U.S.: Verizon Network only	Global Tier A All Networks	Global Tier B All Networks	U.S.: Other Verizon Networks & 3rd Party Network
From	To				
100%	99.50%	N/A	N/A	N/A	N/A
99.49%	99.00%	10%	5%	0%	5%
98.99%	97.00%	15%	15%	10%	15%
96.99%	95.00%	25%	20%	15%	20%
94.99%	93.00%	35%	25%	20%	25%
92.99%	90.00%	50%	30%	25%	30%
Less than 90.00%		100%	100%	100%	100%

4.1.3   Exclusions. In addition to the general exclusions found in Appendix A, the following exclusions apply to the Availability SLA:

4.1.3.1   Periods of Soft Outage.

4.1.3.2   Interruptions for which no Trouble Ticket was opened.

4.1.3.3   Sites installed for less than one full calendar month.

4.1.3.4   CPE not under 24 x 7 maintenance coverage with a 4 hour response time with Verizon or a Verizon approved 3rd Party Maintenance provider.

4.1.3.5   Sites with Cellular Wireless Access.

4.1.3.6   Managed Devices under Cloud-Controlled Routing.

4.1.3.7   Customer Co Management policy changes that cause a Hard Outage.

4.2   Time to Repair (TTR). TTR is the time to resolve a Hard Outage Trouble Ticket at a site.

4.2.1   Calculation
The Customer's TTR will be based on the Hard Outage time per site for each outage event. The TTR time starts when a Trouble Ticket is opened after a Hard Outage by Verizon or the Customer, and concludes with the restoration of Managed WAN. For the Full or Co Management level of service, TTR SLA includes the Local Access line, the WAN infrastructure port, and the Managed Device. For the Monitor and Notify and Physical levels of service, TTR SLA includes only the Local Access line and the WAN infrastructure port.

Managed Device Time To Repair (Hrs.) =

Length of Trouble Ticket resolution for Hard Outage per Managed Device per outage

4.2.2   Credit Structure and Amounts
Customers will be credited for Managed WAN monthly recurring charges for the affected site as shown below.

TABLE 4.2.2.1 TIME TO REPAIR WITH FULL OR CO MANAGEMENT LEVEL OF SERVICE AND VERIZON CARE WITH: OOB ACCESS OR ALTERNATE CIRCUIT WITH SINGLE ROUTER OR DUAL MANAGED DEVICES, OR BACKUP WIRELESS VIA INLINE MANAGEMENT OR A CONSOLE CONNECTION (APPLIES TO EACH MANAGED DEVICE AT A SITE)

Time to Repair Verizon Care		Credit as a % of MRC for Managed WAN			
Hard Outage Repair Time (Per incident)		U.S.: Verizon Network only	Global Tier A All Networks	Global Tier B All Networks	U.S.: Other Verizon Networks & 3rd Party Network
3:30:00	3:59:59	5%	N/A	N/A	N/A
4:00:00	5:59:59	10%	5%	N/A	5%
6 Hours Plus		15%	10%	5%	10%

TABLE 4.2.2.2 TIME TO REPAIR WITH FULL OR CO MANAGEMENT LEVEL OF SERVICE AND APPROVED 3RD PARTY MAINTENANCE WITH: OOB ACCESS OR ALTERNATE CIRCUIT WITH SINGLE ROUTER OR DUAL MANAGED DEVICE, OR BACKUP WIRELESS VIA INLINE MANAGEMENT OR A CONSOLE

CONNECTION (APPLIES TO EACH MANAGED DEVICE
AT A SITE)

Time to Repair	Credit as a % of MRC for Managed WAN			
Hard Outage Repair Time (Per incident)	U.S.: Verizon Network only	Global Tier A All Networks	Global Tier B All Networks	U.S.: Other Verizon Networks & 3rd Party Network
6 Hours Plus	5%	5%	5%	5%

TABLE 4.2.2.3 TIME TO REPAIR WITH FULL OR CO MANAGEMENT LEVEL OF SERVICE AND WITHOUT BACKUP OR
OOB ACCESS (APPLIES TO EACH MANAGED DEVICE AT A SITE)

Time to Repair	Credit as a % of MRC for Managed WAN			
Hard Outage Repair Time (Per incident)	U.S.: Verizon Network only	Global Tier A All Networks	Global Tier B All Networks	U.S.: Other Verizon Networks & 3rd Party Network
16 Hours Plus	5%	5%	5%	5%

TABLE 4.2.2.4 TIME TO REPAIR WITH FULL LEVEL WITH VERIZON CARE OR 3RD PARTY MAINTENANCE ON CLOUD- CONTROLLED ROUTING (APPLIES TO EACH INDIVIDUAL MANAGED DEVICE AT A SITE)

Time to Repair	Credit as a % of MRC for Managed WAN			
Hard Outage Repair Time (Per incident)	U.S.: Verizon Network only	Global Tier A All Networks	Global Tier B All Networks	U.S.: Other Verizon Networks & 3rd Party Network
Greater Than Next Business Day	5%	5%	5%	5%

TABLE 4.2.2.5 TIME TO REPAIR WITH PHYSICAL OR MONITOR AND NOTIFY LEVELS OF SERVICE (APPLIES TO
VERIZON NETWORK AND CIRCUIT ISSUES ONLY)

Time to Repair		Credit as a % of MRC for Managed WAN Service			
Hard Outage Repair Time (Per incident)		U.S.: Verizon Network only	Global Tier A Verizon Network only	Global Tier B Verizon Network only	U.S.: Other Verizon Networks & 3rd Party Network
3:30:00	3:59:59	5%	N/A	N/A	N/A
4:00:00	5:59:59	5%	5%	N/A	N/A
6 Hours Plus		5%	5%	5%	N/A

4.2.3   Exclusions. In addition to the general exclusions found in Appendix A, the following exclusions apply to the TTR SLA:

4.2.3.1   Periods of Soft Outage.

4.2.3.2   Sites with Cellular Wireless Access connections as primary access.

4.2.3.3   For the Full or Co Management level of service: CPE that is not under 24 x 7 maintenance coverage with a 4 hour response time with Verizon or a Verizon approved 3rd Party Maintenance provider.

4.2.3.4 For Cloud-Controlled Routing Full level of service: CPE that is not under 5 x 8 maintenance coverage with onsite break fix and next business day response time with Verizon or a Verizon approved 3rd Party Maintenance provider.

4.2.3.5 For the Co Management level of service: the time due to Customer's policy changes that cause a degradation in application performance or unavailability of the service will be treated as Customer Time.

4.3 Managed WAN Installation SLA. The Managed WAN Installation SLA is defined as the period of time to install Managed WAN with Verizon-provided network services used as primary transport at a Customer Site, as noted in Section 2.1.2 above.

4.3.1 Calculation
The Managed WAN Installation SLA time period starts on the date the Managed WAN service order is approved in the Verizon Business Customer Center portal (VBCC) and ends the date the Managed WAN service is up and billable at that site.

4.3.2 Credit Structure and Amounts
Customer will receive a 50% refund of the non-recurring Managed WAN installation fee for a site if Verizon fails to install Managed WAN service within 45 business days for that site.

4.3.3 Exclusions. In addition to the general exclusions found in Appendix A, the following exclusions apply to the Managed WAN Installation SLA:

4.3.3.1 Orders expedited by Customer;

4.3.3.2. Installations outside of the 48 contiguous United States or circuits terminating outside of the 48 contiguous United States;

4.3.3.3 Delays resulting from an order suspension due to Customer credit issues;

4.3.3.4 Access circuits or ports not ordered by Verizon; and

4.3.3.5 Circuits provided from Other Verizon Networks.

4.4 Proactive Outage Notification SLA. The proactive outage notification SLA provides credits if Verizon fails to notify Customer of a Hard Outage by electronic means (e.g. pager or e-mail).

4.4.1 Calculation
The Notification Period begins with opening of a Trouble Ticket for a Hard Outage. Verizon has 15 minutes to notify Customer's primary point of contact from the start point of the Notification Period. Verizon is in compliance with the proactive outage notification SLA if the Customer opened the Trouble Ticket or contacts Verizon within the Notification Period. Verizon will provide the ticket number and an initial status.

4.4.2 Credit Structure and Amounts
Customer will receive a credit equal to 10% of the monthly recurring charge for each Managed WAN site that was impacted during a Hard Outage that was not properly notified.

4.4.3 Exclusions. In addition to the general exclusions found in Appendix A, the following exclusions apply to the Proactive Outage Notification SLA:

4.4.3.1 Periods of Soft Outage.

4.4.3.2 Events that affect multiple customers including without limitation cable or fiber cuts.

4.4.3.3   Customer point of contact unavailability due to incorrect contact information or other cause.

4.4.3.4   Outages due to group encrypted transport (GET) VPN encryption failure.

4.5   Change Management Service Level Objectives. The express and emergency Change Management service level objectives are to complete certain change management requests, listed below, within 24 hours of the change being scheduled with Customer (an Express Change), or within four hours if designated by Customer as an emergency (an Emergency Change). Emergency Changes are changes requested by Customer's submission of a Priority 1 Trouble Ticket. The semi-automated Managed WAN support for Private IP dynamic bandwidth Change Management service level objective is completion within 72 hours after the change was submitted by Customer in the Verizon Private IP dynamic bandwidth portal.

4.5.1   Express   and   Emergency   Change

Management   Definition   Express   and

Emergency Change Request Types:

These are a subset of current change request types that would be eligible for Express and Emergency Change Management:

- Activate Previously Configured LAN Interfaces
- DHCP Configuration - Modify
- Entity Host Name Change
- Interface Modify
- IP Address/Subnet Mask Change
- IP Network Routed Protocol - Modify
- Modify Filters/Access-Lists - Single Device
- Password Change
- Privilege Exec Commands - Modify
- Request Copy of Managed Device Configuration
- Static Route - Add/Delete/Modify
- Switch Port - Modify
- Terminal Access Controller Access Control System (TACACS)/Radius Server – Modify

Both Emergency and Express change requests do not provide for scheduling, coordination, follow-up, impact assessment or evaluation before or after such request by Customer.

4.5.2   Credit Structure and Amounts. The Change Management service level objectives have no associated credit.

4.5.3   Exclusions. In addition to the general exclusions found in Appendix A, the following exclusions apply to the Change Management Service Level Objectives:

4.5.3.1   Requests submitted between the hours of 12:01 p.m. eastern U.S. time Friday - 11:59 a.m. eastern U.S. time, Sunday.

4.5.3.2   Incomplete information, including the specific commands/configurations.

5.   Credit Application Process

5.1   Managed WAN SLA Application Structure
Credits are not cumulative month to month. If the SLA issue exceeds 30 days, the same schedule applies for each consecutive month. The maximum credit within any one month for the aggregate SLA credits

within that month is 50% of the total MRC for Managed WAN for all sites, or 100% of the total MRC for any one site. Verizon's data and calculations will be used to determine if an SLA has been missed and a credit is due. Verizon will issue a credit within 90 days if its determination of non-compliance with an SLA.

5.2   Process for Customers to Apply for SLA Credits. Customer completes two steps in order to have an outage qualify for a Service Level Agreement credit. First, except for the Installation SLA, a Trouble Ticket needs to be opened in response to Managed WAN issues at the time of the Managed WAN issue. Second, a written request for credit must be made to the account team contact.

5.2.1   Opening a Trouble Ticket
For the Availability, Time to Repair, and Proactive Outage Notification SLAs, a Hard Outage Trouble Ticket must be opened on Verizon's systems, either by Verizon or by Customer's request. A Trouble Ticket provides the record of Hard Outage events.

5.2.2   Submitting a Service Level Agreement Credit Request

5.2.2.1   Installation SLA. Customer must make a written request (e-mail or fax) to the Verizon Account Team for a credit within thirty (30) days after the date that the installation is completed that is beyond the 45 business day SLA with the following information:
● The site and circuit identifier
● The date the site and circuit should have been installed
● The date the site was installed
● The date that Customer order was approved

5.2.2.2   Availability, Time to Repair, and Proactive Outage Notification SLA. Customer must make a request in writing (e- mail or fax) to the Verizon Account Team for a credit within thirty (30) days of the end of the month for which an SLA credit is due with the following information:
● The date the site and circuit outage(s) occurred
● The time the site and circuit outage(s) began and ended
● The site(s) and circuit ID(s) for each affected site.
● Trouble Ticket number for each site and event.

5.2.3   Service Level Agreement Credit Time Limitation

If Verizon has failed to meet the same SLA for three consecutive months, Customer may elect to:
● continue Managed WAN with a limit of six months of credits for any individual SLA within a 12-month period.
● discontinue Managed WAN without liability except for charges incurred prior to discontinuation of Managed WAN. Customer must submit a written disconnect notice to their Verizon Account Team within 30 days following the end of either the third or subsequent consecutive month of Verizon's failure to meet the SLA.

If 3rd Party Network or Maintenance provider causes in whole or in part the payout of SLA credits for three (3) consecutive months, Verizon has the following options:
● require a change of 3rd Party Network or Maintenance provider, as applicable; or terminate its performance obligations under this Managed WAN SLA for the relevant SLA for sites with 3rd Party Network or Maintenance provider.

Appendix A: General Exclusions

The following exclusions apply to all Service Level Agreements contained in this document:

● No credit will be due to the extent the SLA is not met because of any act or omission on the part of the Customer, its contractors or vendors, or any other entity over which the Customer exercises control or has the right to exercise control, other than acts or omissions of Verizon approved 3rd Party Network or

3rd Party Maintenance providers,
- No credit will be due to the extent the SLA is not met because of a Force Majeure event, as defined in the Agreement.
- No credit will be due to the extent the SLA is not met because of scheduled maintenance by Customer or entities under Customer's direction or control.
- No credit will be due to the extent the SLA is not met because of scheduled maintenance by Verizon within Verizon's maintenance windows.
- Except for the Installation SLA, no credit will be due to the extent the SLA is not met because Managed WAN is not up and billable.
- No credit will be due to the extent the SLA is not met because of the amount of time delays due to Customer Time.
- No credit will be due to the extent the SLA is not met because proper power is not available to the CPE.
- Devices with Cloud Controlled Routing under Full Management level of service, where Customer has write administrative access via Verizon approved exception.

Appendix B: Terms and Definitions

Terms and Definitions	Definition
3rd Party Maintenance	Customer contracted 3rd party maintenance.
circuit	Connection and Local Access.
Connection	A port on Customer's WAN connected to Verizon or a 3rd Party Network.
Console Connection	A direct Managed Device management connection that does not require the Managed Device to be configured.
Customer Premise Equipment (CPE)	Service equipment located at the Customer Site.
Customer Provided Access	Customer remits payment for Local Access directly to their Local Access provider and Verizon does not invoice Customer for Local Access charges.
Customer Time	Time delays attributable to or caused by one or more of the following: • Incorrect or incomplete information provided by Customer; • Verizon or the Verizon approved maintenance provider being denied access to CPE or network components at the Customer location when access is required; • Failure or refusal by Customer to release the circuit for testing; or • Customer unavailability where needed to close a Trouble Ticket.
Hard Outage	Managed WAN degradation such that Customer is unable to use Managed WAN and Customer is prepared to release the circuit to Verizon for immediate testing.
Inline Management	Management of through a communication port rather than a Console Connection.
Local Access	The portion of service between Customer's premises and a Verizon designated point-of-presence.

Terms and Definitions	Definition
MCI Legacy Companies	An affiliate of Verizon that was an affiliate of MCI, Inc. prior to the acquisition of MCI, Inc. by Verizon Communications Inc., including one or more of the following entities (without limitation): MCI Communications Services, Inc. d/b/a Verizon Business Services; MCImetro Access Transmission Services LLC d/b/a Verizon Access Transmission Services; MCImetro Access Transmission Services of Virginia, Inc. d/b/a Verizon Access Transmission Services of Virginia; and MCImetro Access Transmission Services of Massachusetts, Inc. d/b/a Verizon Access Transmission Services of Massachusetts, and applicable affiliated operating companies outside the United States.
MRC	Monthly Recurring Charge.
Port	An entrance to and/or exit from a network.
Soft Outage	Managed WAN Service degradation such that Customer is still able to use the Managed WAN Service and Customer is NOT prepared to release the circuit to Verizon for immediate testing.
site	A site is Managed WAN Customer Site that includes CPE and a Connection. Customer Site and "site" are used interchangeably in this SLA.
Trouble Ticket	The result of reporting by a Customer to Verizon of either perceived Managed WAN outage or Managed WAN degradation.

Managed Wireless LAN+ Service Level Agreement

1. **Overview**. The Service Level Agreement (SLA) for Managed Wireless LAN+ (Managed WLAN) Service described herein sets forth Customer's sole remedies for any claim relating to the performance of Managed WLAN Service. Capitalized terms that are not listed in section 13 Definitions, will have the same meaning as defined in the Agreement, Managed WLAN Online Terms, or Service Order, as applicable.

2. **Regional Qualifications**

    2.1 **For Customers with Managed WLAN Service in EMEA and Asia Pacific.** This SLA is offered as part of the MWLAN Service. To qualify for this SLA, Customer must have committed to an Initial Service Term of at least one year. This SLA is incorporated into and forms part of the contract for the provision of MWLAN Service as set out in the relevant Service Order and applicable master terms and conditions of MWLAN Service (for example the International Master Services Agreement or the Asia Pacific Services Agreement) (Agreement). This SLA will apply for the duration of the Service Term commencing with the Service Activation Date for MWLAN Service.

    2.2 **Contracts under German and Austrian Law.** The following paragraph is solely applicable to contracts governed by German or Austrian Law: This SLA, including any Service Credits for breach of quality parameters, is an independent commercial agreement. The quality parameters detailed in this SLA are neither implied warranties of the quality of MWLAN Service (Beschaffenheitsvereinbarungen) nor guarantees under the German or Austrian Civil Code (BGB or ABGB). Service Credits paid under this SLA will be set-off against any potential damage compensation payments.

3. **Available Service Levels/Objectives.** Managed WLAN includes the following service levels:

    - WLAN Controller Availability
    - Time to Repair (TTR)
    - Managed WLAN Installation
    - Proactive Outage Notification

    Managed WLAN includes the following Service Objectives:

    - Change Management.
    - Software Defined Wireless LAN Quality of Service (QoS).

    To be eligible for coverage under this SLA, a Managed WLAN site must have at least one Verizon Managed WAN circuit, unless CCAP or SDWLAN features are used by Customer as part of the Managed WLAN Service.

4. **Parameters**

    4.1 **Location.** The location of Customer's Site(s) and level of Managed WLAN Service determines the parameters for the applicable service levels. Countries covered under this SLA are divided into three categories:

    (i) U.S. – Includes the U.S. Mainland and Hawaii, except as otherwise expressly noted.

    (ii) Global Tier A

Europe	Austria, Belgium, Denmark, Finland, France, Germany, Ireland, Italy, Luxembourg, Netherlands, Norway, Spain, Sweden, Switzerland, United Kingdom.
Asia-Pacific	Australia, China, Hong Kong, Japan, Singapore, South Korea
Americas	Argentina, Brazil, Canada, Chile, Colombia, Mexico, Panama, Peru Venezuela

(iii) Global Tier B – Includes those countries where Verizon provides Managed WLAN Service that are not in the U.S or Global Tier A.

4.2 SLA Parameters

Managed WLAN – Full Service				
SLA	**U.S.**	**Global Tier A**	**Global Tier B**	**Third Party Provided In Band Access**
WLAN Controller Availability with Out of Band (OOB) Access or Alternate Circuit or Backup Wireless	99.95%	99.95%	99.95%	99.5%
WLAN Controller Availability without: Back-up or OOB Access	99.5%	99.5%	99.0%	99.5%
Service Installation	45 Business Days (Hawaii excluded)	Not Available	Not Available	Not Available
TTR – Verizon Care or Customer-contracted Third-Party Maintenance	3.5 Hours	4 Hours	6 Hours	6 Hours
TTR without: Back-up or OOB Access	16 Hours	16 Hours	16 Hours	16 Hours

Managed WLAN – Full Service				
SLA	**U.S.**	**Global Tier A**	**Global Tier B**	**Third Party Provided In Band Access**
TTR – Verizon-provided or Customer-contracted Third-Party Maintenance with Onsite Break-fix Maintenance on Cloud-Controlled Access Point and Software Defined Wireless LAN	Next Business Day	Next Business Day	Next Business Day	Next Business Day
Proactive Outage Notification	15 Minutes	15 Minutes	15 Minutes	15 Minutes

Managed WLAN – Physical Service				
SLA	**U.S.**	**Global Tier A**	**Global Tier B**	**Third Party Provided In Band Access**
Proactive Outage Notification	15 Minutes	15 Minutes	15 Minutes	15 Minutes

Managed WLAN Monitor and Notify				
SLA	**U.S.**	**Global Tier A**	**Global Tier B**	**Third Party Provided In Band Access**
Proactive Outage Notification	15 Minutes	15 Minutes	15 Minutes	15 Minutes

5. **Service Installation SLA**. The Installation SLA is defined as the period of time to install the Managed WLAN at a Site.

5.1 **Calculation.** The Service Installation SLA time period starts on the date the SOR has been executed by both parties and ends the date Managed WLAN at a Site is made available for Customer's use and is billable.

5.2 **Credit Structure and Amounts.** Customer is eligible to receive a fifty percent (50%) credit of the Installation NRC for each Managed Device at a Site to the extent Verizon has not installed such Managed Device within 45 business days.

5.3 **Exclusions/Qualifications.** In addition to the General Exclusions set forth below, the following exclusions and qualifications apply to the Installation Service SLA:

(i) A Customer-ordered installation date that is prior to the 45 Business Day Service Installation time period.

(ii) Delays resulting from an order suspension due to Customer credit issues.

(iii)   Delays due to incomplete or non-installation of an associated Internet or Verizon Managed service.

(iv)   Delays due to the failure of Customer or its third-party contractors to timely perform Customer's responsibilities in accordance with the Managed WLAN + Online Terms.

(v)   Where a site survey or wireless site assessment is performed or is requested by Customer, any delays in the performance of such site survey or assessment due to (a) Customer or its contractors; and (b) remediation work identified in such site survey or assessment.

6. **WLAN Controller Availability SLA.** A WLAN Controller is available if during the period within the Service Term in which Customer has subscribed to Managed WLAN (i) no alarm events have occurred on the Network Operations Center's (NOC) Network Management System, or (ii) no Trouble Ticket has been opened by Customer. If multiple WLAN Controllers are unavailable because of a single WLAN Controller issue, Verizon will only consider the Outage of the single WLAN Controller in its calculation of the Availability SLA; other WLAN Controllers and LAPs attached logically or physically to that single WLAN Controller will not be considered unavailable. WLAN Controller availability is based on the total number of minutes in a calendar month during which the WLAN Controller is unavailable to exchange data divided by the total number of minutes in that month. WLAN Controllers are considered available if the WLAN Controller is available to pass data whether or not data is passing through the WLAN Controller. Each Trouble Ticket will be evaluated by Verizon for appropriate corrective action and Customer will be informed of the status of each closed ticket even where the WLAN Controller is within normal operating parameters.

6.1   **Calculation.** Availability is the percentage of time that the WLAN Controller is available within a given calendar month. Availability only applies to Outages.

Monthly Managed Site Availability (%) =

$$1 - \left(\frac{\text{Total minutes of Outage per month}}{\text{Number of days in calendar month x 24 (hrs.) x 60 (min.)}} \right) \text{ x } 100$$

6.2   **Credit Structure and Amounts.** For any month in which Verizon fails to meet the applicable availability standards for a WLAN Controller, Customer will be eligible for an SLA credit equal to a percentage of the Managed WLAN MRC applicable in that month for the affected WLAN Controller, as indicated in the following tables.

TABLE 6.2.1 WLAN CONTROLLER AVAILABILITY WITH: OOB ACCESS OR ALTERNATE CIRCUIT OR BACKUP WIRELESS (APPLIES TO WLAN CONTROLLER LEVEL PERFORMANCE).

Managed Availability		Percentage of the Managed WLAN MRC for the Affected Month			
From	To	U.S.	Global Tier A	Global Tier B	Third Party Provided In-Band Access
100%	99.95%	N/A	N/A	N/A	N/A
99.94%	99.50%	15%	10%	10%	10%
99.49%	99.40%	25%	20%	20%	20%
99.39%	99.00%	35%	30%	30%	30%
98.99%	98.00%	45%	40%	35%	40%
97.99%	96.70%	50%	50%	40%	50%
Less than 96.7%		100.0%	100.0%	100.0%	100.0%

TABLE 6.2.2 WLAN CONTROLLER AVAILABILITY WITHOUT: BACKUP OR OOB ACCESS (APPLIES TO WLAN CONTROLLER
LEVEL PERFORMANCE).

Managed Availability		Percentage of the Managed WLAN MRC for the Affected Month			
From	To	U.S.	Global Tier A	Global Tier B	Third Party Provided In-Band Access
100%	99.50%	N/A	N/A	N/A	N/A
99.49%	99.00%	10%	5%	N/A	5%
98.99%	97.00%	15%	15%	10%	15%
96.99%	95.00%	25%	20%	15%	20%
94.99%	93.00%	35%	25%	20%	25%
92.99%	90.00%	50%	30%	25%	30%
Less than 90.0%		100.0%	100.0%	100.0%	100.0%

6.3 **Exclusions/Qualifications.** In addition to the general exclusions found in Appendix A, the following conditions apply to the Availability SLA:

(i) WLAN Controllers are not considered unavailable during periods of Outage resulting in whole or in part from Managed WLAN degradation, such as slow data transmission.

(ii) WLAN Controllers are not considered unavailable during interruptions not reported by Customer, or for which no Trouble Ticket was opened.

(iii) SLA coverage is only applicable to WLAN Controllers for which (a) out-of-band access is available, and (b) Customer has purchased a maintenance plan with minimum coverage of 7 days per week by 24 hours per day by 4 hour (i.e., 7x24x4) response time.

(iv) Virtual Controllers with Aruba IAP Management, Lightweight Access Points, Aruba Instant Access Points, Cloud-Controlled Access Points and Software Defined Wireless LAN are not included.

(v) WLAN Controllers are not considered unavailable if Verizon did not receive from Customer the login credentials of the Managed Devices for troubleshooting purposes.

(vi) WLAN Controllers are not considered unavailable if the WLAN Controllers are deployed in High Availability (HA) mode and the WLAN Controller function will be taken over by one of the other WLAN Controllers in the Customer's network.

7. **Time to Repair (TTR) SLA**. TTR is the time to resolve an Outage Trouble Ticket for a Managed Device.

7.1 **Calculation.** TTR is based on the Outage time per Managed Device for each Outage event. The TTR time starts when a Trouble Ticket is opened by Verizon or the Customer after an Outage and concludes with the restoration of Managed Device and the WLAN interface.

Managed Device Time To Repair (Hrs.) = Length of Trouble Ticket resolution per Managed Device per Outage incident

7.2 **Credit Structure and Amounts.** Customer is eligible for a credit for MRC for the affected WLAN Controller as shown below:

TABLE 7.2.1 TIME TO REPAIR WITH FULL LEVEL OF SERVICE AND VERIZON CARE OR APPROVED NON-VERIZON MAINTENANCE WITH: OOB ACCESS OR ALTERNATE CIRCUIT OR BACKUP WIRELESS (APPLIES TO EACH INDIVIDUAL WLAN CONTROLLER AT A SITE)

Time to Repair Verizon Care or Approved Non-Verizon Maintenance

Outage Repair Time (Per incident)		U.S.	Global Tier A	Global Tier B	Third-Party Provided In-Band Access
3:30:00	3:59:59	5%	N/A	N/A	N/A
4:00:00	3:59:59	5%	5%	N/A	N/A
6 Hours Plus		5%	5%	5%	5%

TABLE 7.2.2 TIME TO REPAIR WITH FULL LEVEL OF SERVICE WITHOUT: BACK-UP OR OOB ACCESS (APPLIES TO EACH MANAGED DEVICE AT A SITE)

Time to Repair without Back-up or OOB Access				
Outage Repair Time (Per incident)	U.S.	Global Tier A	Global Tier B	Third-Party Provided In-Band Access
16 Hours Plus	5%	5%	5%	5%

7.3 **Exclusions/Qualifications**. In addition to the General Exclusions set forth below, the following exclusions and qualifications apply to the TTR SLA:

(i)   For Managed Devices managed by the U.S. NOC, Trouble Tickets opened after 4 p.m. Eastern Time will be considered to be opened on the next business day.

(ii)   For Managed Devices managed by the EMEA NOC, Trouble Tickets opened after 4 p.m. Central European Time (CET), or Central European Summertime (CEST) when in effect, will be considered to be opened on the next business day.

(iii)   For Managed Devices managed by the APAC NOC, Trouble Tickets opened after 4 p.m. Philippines Time (PHT) will be considered to be opened on the next business day.

(iv)   If third-party-provided maintenance is modified pursuant to the provider's maintenance contract with Customer, Verizon may similarly adjust associated SLA commitments set forth herein to reflect the revised service levels provided by the third-party maintenance provider.

(v)   Managed Devices are not considered unavailable during periods of Outage resulting in whole or in part from the degradation of Customer's Wireless LAN, such as slow data transmission.

(vi)   SLA coverage is only applicable to (i) WLAN Controllers for which Customer has purchased a maintenance plan with minimum coverage of 7 days per week by 24 hours per day by 4 hour (i.e., 7x24x4) response time; and (ii) Cloud-Controlled Access Points and Software Defined Wireless LAN with Verizon- provided or Customer-contracted Third-Party Maintenance with Onsite Break-Fix Maintenance with minimum coverage of, 5 days per week, 8 hours per day and Next Business Day response time.

(vii)   WLAN Controllers are not considered unavailable if Verizon did not receive from Customer the login credentials of the Managed Devices for troubleshooting purposes.

8. **Proactive Outage Notification SLA.** The Proactive Outage Notification SLA provides credits if Verizon fails to notify Customer of a Managed Device Outage as provided below. Proactive Outage Notification will be provided to the Customer's designated point of contact by e-mail or pager. Verizon has fifteen minutes to notify Customer's primary point of contact from the start point of the Notification Period, as defined below.

8.1 **Calculation.** The "Notification Period" begins with the opening of a Trouble Ticket for an Outage and ends when the Trouble Ticket is closed. Verizon is in compliance with the Proactive Outage Notification SLA if the Customer opened the Trouble Ticket or contacts Verizon within the Notification Period. Verizon will provide the ticket number and an initial status.

8.2 **Credit Structure and Amounts.** Customer is eligible to receive a credit equal to ten percent (10%) of the MRC for each Managed Device affected during an Outage for which timely notification was not

provided to Customer.

8.3 **Exclusions/Qualifications.** In addition to the General Exclusions set forth below, the following exclusions and qualifications apply to the Proactive Outage Notification SLA:

(i) Periods of Outage resulting in whole or in part from the degradation of Customer's wireless LAN;

(ii) Interruptions not reported by Customer, or for which no Trouble Ticket was opened.

(iii) The time resulting from Customer's point of contact unavailability due to incorrect contact information or other cause.

(iv) SLA coverage is only applicable to WLAN Controllers for which out-of-band access is available (except for WLAN Controllers under the Monitor and Notify service level).

(v) SLA coverage is only available if Verizon has received from Customer the login credentials of the Managed Devices for troubleshooting purposes.

9. **Change Management.** Verizon will strive to complete certain change management requests within 24 hours of the change being scheduled with Customer (Express Change), or within four (4) hours if designated by Customer as an emergency (Emergency Change). Emergency changes must be requested by Customer's submission of a Priority 1 Trouble Ticket.

9.1 **Definition.** The following Change Management requests are covered by the Change Management Service Objective:

Activate Previously-configured
LAN Interfaces DHCP
Configuration – Modify
Entity Host
Name
Change
Interface
Modify
IP Address/Subnet Mask Change
Modify Filters/Access-Lists – Single
Managed Device Password Change
Privilege Exec
Commands – Modify
Request Copy of Router
Configuration

Static Route –
Add/Delete/Modify
TACACS/Radius –
Modify

Neither Emergency Change requests nor Express Change requests provide for scheduling, coordination, or follow- up with Customer by Verizon before or after the request. Verizon is not responsible for assessing or evaluating any Emergency or Express Change requests, and will not provide fault isolation of bad or unsupported configurations.

9.2 **Credit Structure and Amounts.** The Change Management Service Level Objective has no associated credit.

9.3 **Exclusions/Qualifications**. In addition to the General Exclusions set forth below, the following exclusions and qualifications apply to the Change Management Service Level Objective:

(i) For Managed Devices managed by the U.S. NOC, requests submitted outside the hours of 7:00-17:00 ET, Monday through Friday will not be eligible for Express or Emergency requests.

(ii)   For Managed Devices managed by the EMEA NOC, requests submitted outside of the hours of 09:00- 17:00 Central European Time (CET), or Central European Summertime (CEST) when in effect, Monday through Friday will not be eligible for Express or Emergency Change requests.

(iii)   For Managed Devices managed by the APAC NOC, requests submitted outside of the hours of 09:00- 17:00 Philippines Time (PHT), Monday through Friday will not be eligible for Express or Emergency Change requests.

(iv)   The Change Management Service Level Objective shall be extended by the amount of time taken to obtain complete information, including specific commands and/or configurations.

10. **Software Defined Wireless LAN Quality of Service (QoS)**. For Customers with the Software Defined Wireless LAN feature, Verizon will seek to meet or exceed certain performance parameters of the Managed WLAN Service 80% of the time.

10.1   **Definition.** The following performance parameters and target performance values are covered by the Software Defined Wireless LAN QoS Service Objective:

Software Defined Wireless LAN QoS Performance Parameters	
Performance Parameter	**Target Performance Value**
Time To Connect	4 seconds per session or less
Throughput	10 Mbps or more
Roaming	2 seconds per roam or less
Successful Connects	95% or more
Coverage	-72 decibel-milliwatts (dBm) or less
Capacity	20% or more
Access Point Uptime	95% or more

10.2   **Credit Structure and Amounts.** The Software Defined Wireless LAN QoS Service Level Objective has no associated credit.

10.3   **Exclusions/Qualifications**. In addition to the General Exclusions set forth below, the following exclusions and qualifications apply to the Software Defined Wireless LAN QoS Service Level Objective:

(i)   Missed performance targets that have not caused the overall performance parameter to be lower than 80%.

(ii)   In the event any performance parameters are disabled, or any target performance value has been adjusted, based on the specific Software Defined Wireless LAN implementation of the Customer, the applicable performance parameter(s) and target performance value(s) will apply.

(iii) Missed performance targets that are caused by outages, configuration updates or maintenance windows on Customer Equipment, such as, but not limited to, Customer-managed routers, switches, DHCP servers or disruptions caused by power outages.

(iv)   Missed Roaming, Coverage, Capacity, and Time To Connect performance targets for Customer Sites where Verizon has not provided a (remote or onsite) wireless assessment.

(v)   Missed Throughput performance targets for Customer Sites where the bandwidth capacity of the Wide Area Network (WAN) connectivity and / or Local Area Network (LAN) connectivity is below 10 Mbps per expected Customer user of the Wi-Fi network.

(vi)   Missed performance targets due to the use of legacy, co-existing Wi-Fi infrastructure and 802.11a/b Wi-Fi client devices.

(vii) WLAN Controllers, Virtual Controllers with Aruba IAP Management, Lightweight Access Points, Aruba Instant Access Points and Cloud-Controlled Access Points are not included.

11. Credit Application Process.

11.1 **Credit Terms.** Credits are not cumulative month-to-month. If an SLA issue crosses months, the "triggering event" for purposes of credit will be deemed to have occurred in the month in which the SLA non-compliance occurs. Verizon's data and calculations will be used to determine if an SLA has been missed and a credit is due. Verizon will issue a credit within 90 days of determining a credit is due. The maximum credit within any one month for all SLA non-compliances within that month is fifty percent (50%) of the total MRC for Managed WLAN for all Managed Devices. A minimum of two Managed Devices must be managed by Verizon in a single network for any credits to be available. Except with respect to contracts under German or Austrian law, credits made by Verizon to Customer under this SLA are the sole and exclusive remedy available to Customer for any failure to meet an SLA.

11.2 **Application Process for Credits**

11.2.1 **Opening a Trouble Ticket.** To be eligible to qualify an Outage for an SLA credit, Customer must have requested that an Outage Trouble Ticket be opened on Verizon's systems. A Trouble Ticket records the Outage event.

11.2.2 **Submitting an SLA Credit Request**

11.2.2.1 **Installation SLA.** Customer must make a written request (e-mail or fax) to the Verizon Account Team within thirty (30) days after the date the Managed Device installation is completed with the following information:
- The Site identifier
- The date the parties agreed that the Managed Device should have been installed
- The date the Managed Device was installed
- The date that the SOR was executed by both parties

11.2.2.2 **WLAN Controller Availability, TTR, and Proactive Outage Notification SLA.** Customer must request a credit in writing (e-mail or fax) to the Verizon Account Team within thirty (30) days of the Outage with the following information:
- The date the Managed Device Outage occurred
- The time the Managed Device Outage began and ended
- The Outage location of the Managed Device.
- Trouble Ticket number for each Site and event.

11.3 **Enduring SLA Non-Compliance.** If an SLA is non-compliant for three consecutive months, Customer may elect to:
- Continue the Managed WLAN Service with a limit of six months of credits for any individual SLA within a 12-month period.
- Discontinue the Managed WLAN Service without liability except for charges incurred prior to discontinuation of the Managed WLAN Service. Customer must submit a written disconnect notice to its Verizon Account Team within 30 days following the end of either the third or subsequent consecutive month of Verizon's failure to meet the SLA.

If Customer-contracted Third-Party Maintenance provider causes the payout of SLA credits for three consecutive months, Verizon has the following options:

- Require a change of Customer-contracted Third-Party Maintenance provider, as applicable; or
- Terminate its performance obligations hereunder for the related SLA.

12. **General Exclusions.** No credit will be payable pursuant to this SLA to the extent an SLA is not met:
- Due to any act or omission on the part of Customer, its contractors or vendors, or any other entity over

which Customer exercises control or has the right to exercise control other than acts or omissions of Verizon-approved third-party maintenance providers.

- Because of a Force Majeure event, as defined in the Agreement.
- Because of scheduled maintenance by Customer or entities under Customer's direction or control.
- Because of scheduled maintenance by Verizon within Verizon's maintenance windows.
- Because of the amount of time delays due to Customer Time, defined below.
- Due to performance-affecting issues related to or resulting from (but not limited to) rogue network devices, viruses, worms, misconfigured unmanaged network devices attached to the WLAN being managed, or other events/devices beyond the scope of Managed WLAN Service or control of Verizon.
- Managed Devices with Cloud-Controlled Access Point under Full Management level of service, where Customer has been provided with write administrative access.

13. Definitions

Terms	Definition
Customer Time	Time attributable to or caused by one or more of the following: • Incorrect or incomplete information provided by Customer. • Verizon or the Verizon approved maintenance provider being denied access to CPE or network components at the Customer site when access is required. • The analog telephone connection for OOB access is either unavailable or not maintaining a minimum 9600 bits per second connection such that Verizon cannot troubleshoot the Managed Device and Verizon has not been notified by Customer that such minimum OOB access has been restored. • Failure or refusal to release affected Managed Device(s) for testing. • Customer unavailability where needed to close a Trouble Ticket.
Managed Device	Any WLAN CPE managed by Verizon pursuant to the provision of Managed WLAN Service.
Outage(s)	An Outage is defined as an unscheduled period in which the Managed Device is interrupted and unavailable for use by Customer for sixty (60) or more concurrent seconds (UAS) within a 15-minute period measured by Verizon. UAS is the American National Standards Institute standard (ANSI) T1.231.
Service Restoration Priorities	Process by which Managed WLAN disruptions are ranked by the Verizon Customer Service Center.
Site	A site is Customer's Managed WLAN location which includes a Managed Device.
Trouble Ticket	A ticket opened within Verizon's NOC from an internal Verizon report or a report by a Customer to Verizon of either a perceived Outage or Managed WLAN degradation.
Verizon Customer Service Center	Centers where Customers call in to report Managed WLAN issues.

Managed Services SLAs

Verizon's Managed Services include the following SLAs:

- Virtual Network Services (VNS) Session Border Controller as a Service (SBCaaS) – See SLA under Voice Services

- Managed WAN – See SLA under SOHO Services

- Managed Wireless LAN – See SLA under SOHO Services

- Managed LAN – Provided on the pages that follow

Managed LAN Service Level Agreement

1. Overview

   1.1 Managed LAN offers certain service level agreements as shown below. Capitalized terms that are not defined in Appendix B below are defined pursuant to Customer's Agreement with Verizon for Managed LAN Service. These SLAs are for the Managed Devices shown in Customer's SOR.

   1.2 For contracts governed by German or Austrian Law, this SLA, including any Service Credits for breach of quality parameters, is an independent commercial agreement. The quality parameters detailed in this SLA are neither implied warranties of the quality of Managed LAN Service (Beschaffenheitsvereinbarungen) nor guarantees under the German or Austrian Civil Code (BGB or ABGB). Service Credits paid under this SLA will be set-off against any potential damage compensation payments.

   1.3 SLAs and Service Objectives:

   <u>The Managed LAN SLAs are as follows</u>:

   LAN Switch
   Availability
   Time to
   Repair (TTR)
   Managed
   LAN
   Installation
   Proactive Outage

   Notification <u>The Managed</u>

   <u>LAN Service objectives are</u>:

   Change Management

2. SLA Details

   2.1 Coverage Categories.

   The Managed LAN SLAs vary by level of Managed LAN service, geographic location, network provider, and maintenance, provider as specified below.

   2.1.1   Geographic Location. The location of a Customer site determines the applicable service levels. The countries covered under the Managed LAN SLA are divided into three categories:

   1.   U.S. – The U.S. Mainland and Hawaii (with Verizon WAN In Band Access)
   2.   Global Tier A

Europe	Asia Pacific	Americas
Austria	Australia	Argentina
Belgium	China	Brazil
Denmark	Hong Kong	Canada
Finland	Japan	Chile
France	Singapore	Colombia
Germany	South Korea	Mexico
Ireland		Panama
Italy		Peru

Europe	Asia Pacific	Americas
Luxembourg		Venezuela
Netherlands		
Norway		
Spain		
Sweden		
Switzerland		
United Kingdom		

3. Global Tier B –the countries where Verizon provides Managed LAN that are not in the U.S or Global Tier A.

2.1.2 Network Provider. The network provider for primary access also determines the applicable service levels. All SLAs provided herein are for Verizon WAN InBand Access except where noted. The networks covered under the Managed LAN SLA are divided into two categories:

1. Verizon WAN In-Band Access
2. Third Party Provided In-Band Access

2.1.3 Maintenance Provider. Maintenance may be provided by Verizon Care or by an approved Customer or Verizon-contracted Third-Party Maintenance Provider. The current approved Third Party Maintenance Providers are IBM, Siemens, Cisco, HP, NCR, and Unisys. For SLA metrics that vary by maintenance provider, Customer will get the same SLA for Verizon-contracted Third Party Maintenance Providers as for Verizon Care. As used in this SLA, "Third Party Maintenance" means Customer-contracted Third Party maintenance.

3. Managed LAN SLA

3.1 Service Level Agreement by Location, Category, Level of Managed LAN service, Network Provider, and Maintenance Provider

Table 3.1 Managed LAN Full Service Level Agreements

Parameter	U.S.	Global Tier A	Global Tier B	Third Party Provided In Band Access
LAN Switch Availability with: OOB Access or Alternate Circuit or Backup Wireless	99.95%	99.95%	99.95%	99.95%
LAN Switch Availability without: Backup or OOB Access	99.5%	99.5%	99.0%	99.5%
TTR – Verizon Care with: OOB Access or Alternate Circuit or Backup Wireless	3.5 Hours	4 Hours	6 Hours	6 Hours

Parameter	U.S.	Global Tier A	Global Tier B	Third Party Provided In Band Access
TTR – Third-Party Maintenance with: OOB Access or Alternate Circuit or Backup Wireless	6 Hours	6 Hours	6 Hours	6 Hours
TTR without: Backup or OOB Access	16 Hours	16 Hours	16 Hours	16 Hours
TTR – Verizon Care or Customer-contracted Third-Party Maintenance with Onsite Break-fix on Cloud-Controlled Switching and Cloud-Controlled Camera	Next Business Day	Next Business Day	Next Business Day	Next Business Day
Managed LAN Installation	45 Business Days (Hawaii excluded)	Not Available	Not Available	Not Available
Proactive Outage Notification	15 Minutes	15 Minutes	15 Minutes	15 Minutes

Table 3.2 Managed LAN Physical Service Level Agreement

Parameter	U.S.	Global Tier A	Global Tier B	Third-Party Provided In Band Access
Proactive Outage Notification	15 Minutes	15 Minutes	15 Minutes	15 Minutes

Table 3.3 Managed LAN Monitoring and Notify Service Level Agreement

Parameter	U.S.	Global Tier A	Global Tier B	Third-Party Provided In Band Access
Proactive Outage Notification	15 Minutes	15 Minutes	15 Minutes	15 Minutes

4. Service Level Agreements and Objectives Defined

4.1 Availability: A LAN Switch is available if i) no alarm events have occurred on the Network Operations Center's (NOC) Network Management System, or ii) no Trouble Ticket has been opened by Customer. If multiple LAN Switches are unavailable because of a LAN Switch issue, Verizon will only consider the Outage of the affected LAN Switch in its calculation of the Availability SLA and LAN Switches attached logically or physically to that LAN Switch will not be considered unavailable. LAN Switch availability is based on the total number of minutes in a Calendar Month during which the LAN Switch is unavailable to exchange data divided by the total number of minutes in that month. LAN Switches are considered available if the LAN Switch is available to pass data whether data is passing through the LAN Switch or not. Availability is based on the total number of minutes per calendar month.

Each Trouble Ticket will be evaluated by Verizon for appropriate corrective action and Customer will be informed of the status of each closed ticket even where the LAN Switch is within normal operating parameters.

4.1.1 Calculation

Availability is the percentage of time that the LAN Switch is available within a given calendar month. Availability only applies to Outages.

Monthly Managed Site Availability (%) =

$$1 - \left(\frac{\text{Total minutes of Outage per month}}{\text{Number of days in calendar month x 24 hrs x 60 min}} \right) \times 100$$

4.1.2 Credit Structure and Amounts

For any month in which Verizon fails to meet the applicable availability standards for a LAN Switch, Customer will be eligible for an SLA credit equal to a percentage of the Managed LAN monthly recurring charges for the affected LAN Switch, as indicated in the following tables.

TABLE 4.1.2.1 LAN SWITCH AVAILABILITY WITH: OOB ACCESS OR ALTERNATE CIRCUIT OR BACKUP WIRELESS (APPLIES TO LAN SWITCH LEVEL PERFORMANCE).

Managed Availability %		U.S.	Global Tier A	Global Tier B	Third Party Provided In Band Access
From	To				
100%	99.95%	N/A	N/A	N/A	N/A
99.94%	99.50%	15%	10%	10%	10%
99.49%	99.40%	25%	20%	20%	20%
99.39%	99.00%	35%	30%	30%	30%
98.99%	98.00%	45%	40%	40%	35%
97.99%	96.70%	50%	50%	50%	40%
Less than 96.7%		100.0%	100.0%	100.0%	100%

TABLE 4.1.2.2 LAN SWITCH AVAILABILITY WITHOUT: BACKUP OR OOB ACCESS (APPLIES TO LAN SWITCH LEVEL PERFORMANCE).

Managed Availability %		U.S.	Global Tier A	Global Tier B	Third Party Provided In Band Access
From	To				
100%	99.50%	N/A	N/A	N/A	N/A
99.49%	99.00%	10%	5%	N/A	5%
98.99%	97.00%	15%	15%	10%	15%
96.99%	95.00%	25%	20%	15%	20%
94.99%	93.00%	35%	25%	20%	25%
92.99%	90.00%	50%	30%	25%	30%
Less than 90.0%		100.0%	100.0%	100.0%	100.0%

4.1.3 Exclusions. In addition to the general exclusions found in Appendix A, the following conditions apply to the Availability SLA:

4.1.3.1 LAN Switches are not considered unavailable during periods of Outage resulting in whole or in part from Managed LAN degradation, such as slow data transmission.

4.1.3.2 LAN Switches are not considered unavailable during interruptions not reported by Customer, or for which no Trouble Ticket was opened.

4.1.3.3 The Availability SLA does not apply to LAN Switches installed for less than one full calendar month.

4.1.3.4 LAN Switches under Cloud-Controlled Switching.

4.1.3.5 Cameras under Cloud-Controlled Camera.

4.2 Time to Repair (TTR). TTR is the time to resolve an Outage Trouble Ticket for a Managed Device under management.

    4.2.1   Calculation
The Customer's TTR is based on the Outage time per Managed Device for each Outage event. The TTR time starts when a Trouble Ticket is opened by Verizon or the Customer after an Outage and concludes with the restoration of LAN Switch and the LAN interface or the Camera, as applicable.

        Managed Device Time To Repair (Hrs.) =

        Length of Trouble Ticket resolution per Managed Device per Outage

    4.2.2   Credit Structure and Amounts
Customers will be credited for Managed LAN monthly recurring charges for the affected Managed Device as shown below.

TABLE 4.2.2.1 TIME TO REPAIR WITH FULL LEVEL OF SERVICE AND VERIZON CARE WITH: OOB ACCESS OR
ALTERNATE CIRCUIT OR BACKUP WIRELESS (APPLIES TO EACH INDIVIDUAL MANAGED DEVICE AT A SITE)

Time to Repair Verizon Care				
Outage Repair Time (Per incident)		U.S.	Global Tier A	Global Tier B	Third-Party Provided In-Band Access
3:30:00	3:59:59	5%	N/A	N/A	N/A
4:00:00	3:59:59	5%	5%	N/A	N/A
6 Hours Plus		5%	5%	5%	5%

TABLE 4.2.2.2 TIME TO REPAIR WITH FULL LEVEL OF SERVICE AND APPROVED NON-VERIZON MAINTENANCE WITH: OOB ACCESS OR ALTERNATE CIRCUIT OR BACKUP WIRELESS (APPLIES TO EACH MANAGED DEVICE AT A SITE)

Time to Repair Third-Party Maintenance				
Outage Repair Time (Per incident)	U.S.	Global Tier A	Global Tier B	Third-Party Provided In-Band Access
6 Hours Plus	5%	5%	5%	5%

TABLE 4.2.2.3 TIME TO REPAIR WITH FULL LEVEL OF SERVICE WITHOUT: BACKUP OR OOB ACCESS (APPLIES TO EACH MANAGED DEVICE AT A SITE)

Time to Repair without Backup or OOB Access				
Outage Repair Time (Per incident)	U.S.	Global Tier A	Global Tier B	Third-Party Provided In-Band Access
16 Hours Plus	5%	5%	5%	5%

TABLE 4.2.2.4 TIME TO REPAIR WITH VERIZON-PROVIDED OR CUSTOMER-CONTRACTED THIRD-PARTY MAINTENANCE WITH ONSITE BREAK-FIX MAINTENANCE ON CLOUD-CONTROLLED SWITCHING OR CLOUD- CONTROLLED CAMERA (APPLIES TO EACH INDIVIDUAL MANAGED DEVICE AT A SITE)

Time to Repair Verizon Care or Customer-contracted Third-Party Maintenance with Onsite Break-fix on Cloud-Controlled Switching or Cloud-Controlled Camera				
Outage Repair Time (Per incident)	U.S.	Global Tier A	Global Tier B	Third-Party Provided In-Band Access
24 Hours Plus	5%	5%	5%	5%

4.2.3   Exclusions. In addition to the general exclusions found in Appendix A, the following conditions apply to the TTR SLA:

4.2.3.1 Managed Devices are not considered unavailable during periods of Outage resulting in whole or in part from Managed LAN degradation, such as slow data transmission or Camera Outages related to the picture content or optics working.

4.2.3.2 SLA commitments may be adjusted to reflect the service levels provided by the maintenance provider. Customer must contract for a minimum 7 days/week by 24 hours per day by 4 hour (i.e., 7x24x4) maintenance from Third-party provider for TTR and Availability SLAs to be offered. For Cloud-Controlled Switching and Cloud-Controlled Camera, Customer must contract for a minimum 5 days/week by 8 hours per day by next business day maintenance from Third-party provider for the TTR SLA to be applicable.

4.3   Managed LAN Installation SLA. The Managed LAN Installation SLA is defined as the period of time to install the Managed LAN at a Site.

4.3.1   Calculation
The Managed LAN Installation SLA time period starts on the date the Customer approves the CDD provided by Verizon and ends the date the Managed LAN is up and billable at that Site.

4.3.2   Credit Structure and Amounts
Customer is eligible to receive a fifty percent (50%) credit of the non-recurring Managed LAN installation fee for a Managed Device if Verizon fails to install the Managed Device within 45 business days.

4.3.3   Exclusions. In addition to the general exclusions found in Appendix A, the following exclusions apply to the Managed LAN Installation SLA:

4.3.3.1 A Customer-ordered installation date that is prior to the 45 business day Installation SLA is not available for the installation SLA;

4.3.3.2. Installations outside of the U.S. Mainland are not available for the installation SLA;

4.3.3.3 Delays resulting from an order suspension due to Customer credit issues will not be counted toward the installation period;

4.4   Proactive Outage Notification SLA. The proactive outage notification SLA provides credits if Verizon fails to notify Customer of a Managed Device Outage as provided below. Proactive Outage Notification will be provided to the Customers' designated point of contact by e-mail or pager. Verizon has 15 minutes to notify Customer's primary point of contact from the start point of the Notification Period, as defined below.

4.4.1   Calculation
The "Notification Period" begins with opening of a Trouble Ticket for an Outage and ends when

the Trouble Ticket is closed. Verizon is in compliance with the proactive outage notification SLA if the Customer opened the Trouble Ticket or contacts Verizon within the Notification Period. Verizon will provide the ticket number and an initial status.

4.4.2   Credit Structure and Amounts
Customer is eligible to receive a credit equal to ten percent (10%) of the monthly recurring charge for each Managed Device which was impacted during an Outage that was not properly notified.

4.4.3   Exclusions. In addition to the general exclusions found in Appendix A, the following conditions apply to the Proactive Outage Notification SLA:

4.4.3.1   Periods of Outage resulting in whole or in part from Managed LAN degradation, such as slow data transmission or Camera Outages related to the picture content or optics working are not included in the Proactive Outage Notification SLA.
4.4.3.2   Interruptions not reported by Customer, or for which no Trouble Ticket was opened are not included within the Proactive Outage Notification SLA.
4.4.3.3   The time resulting from the Customer point of contact unavailability due to incorrect contact information or other cause is not included in the Proactive Outage Notification SLA.

4.5 Change Management Service Level Objective. The Change Management service level objective is to complete certain change management requests, listed below, within 24 hours of the change being scheduled with Customer, or within four (4) hours if designated by Customer as an emergency. Emergency changes must be requested by Customer's submission of a Priority 1 Trouble Ticket.

4.5.1   Definition

Express Change Request Types:

These are a subset of current change request types that would be eligible for the standard change management objective:

Activate Previously Configured
LAN Interfaces DHCP
Configuration - Modify
Entity Host
Name
Change
Interface
Modify
IP Address/Subnet Mask Change
IP Network Routed Protocol - MODIFY
Modify Filters/Access-Lists – Single
Managed Device Password Change
Privilege Exec
Commands - Modify
Request Copy of Router
Configuration Static
Route -
Add/Delete/Modify Switch
Port - Modify
Terminal Access Controller Access Control System (TACACS)/Radius Server – Modify

Both Emergency and Express change requests have no scheduling, coordination or follow-up with Customer by Verizon before or after the request. Impact assessment and evaluation of the change

is not required. However, Verizon will not provide fault isolation of bad or unsupported configurations.

4.5.2   Credit Structure and Amounts. The Change Management service level objective and has no associated credit.

4.5.3   Exclusions. In addition to the general exclusions found in Appendix A, the following exclusions apply to the Change Management service level objective:

- For Devices managed by the U.S. Network Operating Center (NOC), requests submitted outside the hours of 7:00-17:00 Eastern Time, Monday through Friday, will not be eligible for Express or Emergency requests.
- For Devices managed by the Europe Middle East Asia (EMEA) NOC, requests submitted outside the hours of 9:00-17:00 Central European Time (CET), or Central European Summertime (CEST) when in effect, Monday through Friday, will not be eligible for Express or Emergency Change requests.
- For Devices managed by the Asia Pacific (Asia-Pac) NOC, requests submitted outside the hours of 09:00-17:00 Philippines Time (PHT), Monday through Friday, will not be eligible for Express or Emergency Change requests.
- The Change Management Service Level Objective shall be extended by the amount of time taken to obtain complete information, including specific commands and/or configurations.

5.   Credit Application Process. This provision applies to all SLAs.

5.1   Managed LAN SLA Application Structure
Credits are not cumulative month to month. If the SLA issue exceeds 30 days, the same schedule applies for each consecutive month. The maximum credit within any one month for the aggregate SLA credits within that month is 50% of the total MRC for the Managed LAN for all Managed Devices. Verizon's data and calculations will be used to determine if an SLA has been missed and a credit is due. Verizon will issue a credit within 90 days if it determines that a credit is due.

5.2   Process for Customers to Apply for SLA Credits. Customer completes two steps in order to have an Outage qualify for a Service Level Agreement credit. First, except for the Installation SLA, a Trouble Ticket needs to be opened in response to Managed LAN issues at the time of the Managed LAN issue. Second, a written request for credit must be made to the account team contact.

5.2.1   Opening a Trouble Ticket
For the Availability, TTR, and Proactive Outage Notification SLAs, an Outage Trouble Ticket must be opened, either by Verizon or Customer. A Trouble Ticket records the Outage event.

5.2.2   Submitting a Service Level Agreement Credit Request

5.2.2.1   Installation SLA Customer must request a credit in writing (e-mail or fax) to the Verizon Account Team within thirty (30) days after the date that the Managed Device installation is completed with the following information:
- The Site identifier
- The date the Managed Device should have been installed
- The date the Managed Device was installed
- The date that Customer approved the CDD

5.2.2.2   Availability, Time To Repair, and Proactive Outage Notification SLA Customer must request a credit in writing (e-mail or fax) to the Verizon Account Team within thirty (30) days of the Outage with the following information:
- The date the Managed Device Outage occurred
- The time the Managed Device Outage began and ended

- The Outage location of the Managed Device
- Trouble Ticket number for each Site and event.

5.2.3   Service Level Agreement Credit Time Limitation

If Verizon has failed to meet the same SLA for three (3) consecutive months, Customer may elect to:

- Continue the Managed LAN with a limit of six (6) months of credits for any individual SLA within a 12- month period.
- Discontinue Managed LAN without liability except for charges incurred prior to discontinuation of the Managed LAN. Customer must submit a written disconnect notice to their Verizon Account Team within 30 days following the end of either the third or subsequent consecutive month of Verizon's failure to meet the SLA.

If Third-Party Maintenance provider causes the payout of SLA credits for three (3) consecutive months, Verizon has the following options:

- Require a change of Third-Party Maintenance provider, as applicable; or
- Terminate its performance obligations under this Managed LAN SLA for the related SLA.

Appendix A: General Exclusions

The following exclusions apply to all Service Level Agreements contained in this document:

- No credit will be due to the extent the SLA is not met due to any act or omission on the part of the Customer, its contractors or vendors, or any other entity over which the Customer exercises control or has the right to exercise control, including without limitation, disconnection of power to the CPE will not be eligible for SLA credits, other than acts or omissions of Verizon approved Third-Party Network or Third-Party Maintenance providers.
- No credit will be due to the extent the SLA is not met because of a Force Majeure event, as defined in the Agreement.
- No credit will be due to the extent the SLA is not met because of scheduled maintenance by Customer or entities under Customer's direction or control.
- No credit will be due to the extent the SLA is not met because of scheduled maintenance by Verizon within Verizon's maintenance windows.
- With the exception of the Installation SLA, no credit will be due to the extent the SLA is not met because Managed LAN is not up and billable.
- No credit will be due for CPE with less than 24 x 7 x 4 coverage with Verizon or a Verizon approved Third-party maintenance provider.
- No credit will be due to the extent the SLA is not met because of the amount of time delays due to Customer Time.
- No credit will be due for Trouble Tickets associated with any act or omission of any third party.
- SLA commitments may be adjusted to reflect the service levels provided by the maintenance provider.
- No credit will be due to the extent that the SLA is not met due to performance impacting issues related to or resulting from (but not limited to) rogue network devices, viruses, worms, misconfigured unmanaged network devices attached to the LAN being managed or other impacting events/devices beyond the scope and control of Verizon; and
- Managed Devices with Cloud-Controlled Switching or Cloud-Controlled Camera under Full Management level of service, where Customer has been provided with write administrative access.

Appendix B: Terms and Definitions

Terms and Definitions	Definition
Camera	Means the camera, as specified by reference to these terms, which will be managed at Customer Site by Verizon for this

Terms and Definitions	Definition
	MLAN Service.
Customer Service Center	Service centers where Customers call in to report Managed LAN issues.
Customer Time	Time attributable to or caused by one or more of the following: • Incorrect or incomplete information provided by Customer; • Verizon or the Verizon approved maintenance provider being denied access to CPE or network components at the Customer location when access is required; • The analog telephone connection for OOB access is either unavailable or not maintaining a minimum 9600 bits per second connection such that Verizon cannot troubleshoot the LAN Switches and Verizon has not been notified by Customer that such minimum OOB access has been restored; • Failure or limited bandwidth of Customer's WAN connecting LAN sites where only one WAN InBand Access site is provided; • Failure or refusal to release the Managed Device for testing; or • Customer unavailability where needed to close a Trouble Ticket.
In-Band Access	In-Band access may be provided either: i) through a Verizon Managed WAN site connected to Customer's LAN network, or

Terms and Definitions	Definition
	ii) through Customer-provided Internet access (from Verizon or a Third-party) using IP Sec encryption technology with Verizon Internet Dedicated Managed Service connected to Customer's LAN network (WAN In-Band Access). In-Band access is required for each of Customer's LAN locations or Verizon can manage more than one Customer LAN using one WAN InBand Access site.
LAN Switch	The LAN switches and associated OOB modems or terminal servers, as specified by reference to these terms, which will be managed at Customer Site by Verizon for this MLAN Service.
Managed Device	A LAN Switch or a Camera
MRC	Monthly Recurring Charge.
Outage(s)	An unscheduled period in which the Managed Device is interrupted and unavailable for use by Customer for sixty (60) or more unavailable Seconds (UAS) within a 15-minute period measured by Verizon. UAS is the American National Standards Institute standard (ANSI) T1.231. As Verizon does not have access to the Camera's audio or video, a Camera Outage is limited to a determination that the Camera is no longer "up" and connected to the Customer Network and not related to the picture content, optics, or audio function or quality. As an example, a blocked view is not an Outage.
Port	A physical interface for data cables to a Managed Device.
Service Restoration Priorities	Process by which Managed LAN disruptions are ranked by the Customer Service Center.
Site	A site is Customer's Managed LAN location which includes a Managed Device.

Terms and Definitions	Definition
Third-Party In-Band Access	IPsec inband access transport provided by a Third-party Internet access provider.
Third-Party Maintenance	Maintenance services from third parties approved by Verizon from time to time. The current approved Third-Party Maintenance providers are IBM, Siemens, Cisco, HP, NCR, and Unisys.
Trouble Ticket	A ticket opened within Verizon's NOC from an internal Verizon report or a report by a Customer to Verizon of either perceived Outage or Managed LAN degradation.
WAN In-Band Access	See In-Band Access definition for defined term.
Verizon In-Band Access	In-Band Access provided through a Verizon Managed WAN site connected to Customer's LAN network.