



## WAVELENGTH SERVICES SOLUTION +

### Part IV: 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.

##### 2.1 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%

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- 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.

$$\frac{100 \times (\text{Total Minutes in a calendar month} - \text{Total Minutes of Non-Availability})}{\text{Total Minutes in a calendar month}} = \text{Circuit Availability}$$

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)

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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:

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- 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 the 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	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%	100%	40%	30%
98.2%	97.5%		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.

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<b>Order Cancellation Credit for Wavelength Service:</b>	\$800
<b>Order Cancellation Credit for Local Access, per access (if applicable):</b>	\$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.

<b>Round Trip Delay Restoral Credits</b>	
<b>Days it takes to restore RTD</b>	<b>One-Time Credit Allowance (% of Impacted Circuit Wavelength Services and applicable Local Access MRC)</b>
<= 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 ~~Service Availability or~~ TTR standard for one month, Verizon will provide, as applicable, a ~~Service Availability~~ credit equal to 25 percent of the MRC for that circuit, after application of all discounts.
- 5.6.2 For failure to meet the ~~Service Availability or~~ TTR standard for the same circuit for two consecutive months, Verizon will provide, as applicable, a ~~Service Availability~~ 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 ~~Service Availability or~~ 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 ~~Service Availability or~~ 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;

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- 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.