



STATE OF WASHINGTON
MILITARY DEPARTMENT
EMERGENCY MANAGEMENT DIVISION

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Camp Murray, Washington 98430-5122
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May 18, 2017

Mr. Bruce King
CenturyLink
1600 7th Avenue
Seattle, Washington 98191

Dear Mr. King:

In an email to CenturyLink dated December 6, 2016, the State of Washington officially requested service credit for the telecommunications outage affecting 911 services in Klickitat and Skamania counties from November 6 to November 7, 2016, under the CenturyLink IQ Network Retail Service Level Agreement, as specified in contract E09-196 between the State of Washington and CenturyLink. This letter is to request a review of the calculations used to determine the amount of the credit and to request documentation of CenturyLink's method of calculation.

Based on the information contained in the series of NEMC reports and in CenturyLink's Reason for outage, it indicated that the E911 ESInet T1s were not available for 35 hours, 50 minutes. Under the terms of the Service Level Agreement, each cumulative hour of network unavailability qualifies for a credit of one day's charges prorated from the monthly reoccurring charge. Based on this formula, the State calculated the combined service credit at \$254.60 per hour or \$9,123.17 for the outage. In the February invoice, we did receive a credit of \$782.92, significantly less than what was owed.

Even though our contract SLA states that the measurement includes "all network components of the CenturyLink IP network", the adjustment group determined that the credit only applies to port and diversity charges. They further determined that the maximum credit is for seven hours, contrary to the SLA which states maximum service credits of seven days.

In subsequent emails to CenturyLink in March and April, Lisa Barbier, State E911 Network & Telecom Financial Program Manager requested a review of the calculations. She also requested that the adjustment group provide the exact reference within the contract SLA to document their



claim that it applies only to port and diversity and is limited to 7 hours. The reply received was that the adjustment group stands by their calculations, with no documentation or reference.

Please provide the documentation and rationale as soon as possible.

Sincerely,

A handwritten signature in blue ink, appearing to read 'AW', with a long horizontal line extending to the right.

Adam Wasserman
State E911 Coordinator

cc: Rebecca Beaton, Washington State Utility & Transportation Commission

**CENTURYLINK IQ® +
RETAIL SERVICE LEVEL AGREEMENT**

(not applicable to services offered under the CenturyLink Wholesale and Enhanced Services Agreements)

This Service Level Agreement ("SLA") is effective as of the first day of the second month after initial installation of Services. "Service" includes the applicable components of CenturyLink IQ + Service. This SLA applies to Service ordered by CenturyLink's customer pursuant to an agreement ("Agreement") with CenturyLink Communications, LLC f/k/a Qwest Communications Company, LLC d/b/a CenturyLink QCC ("CenturyLink"). On April 1, 2014, Qwest Communications Company, LLC completed a name change to CenturyLink Communications, LLC. References in supporting agreements or other documents, to Qwest Communications Company, LLC or its predecessors are replaced with "CenturyLink Communications, LLC." For Customer's claims related to Service deficiencies, interruptions or failures, Customer's exclusive remedies are limited to those remedies set forth in this SLA.

1. Network and Port Components.

1.1 Components. The SLA Goal measurement includes: (a) all network components of the CenturyLink IP network and (b) CenturyLink Provided Access for the domestic Network Availability and Installation goals only. The CenturyLink IP networks include routers, switches, fiber and any other facilities that are owned by CenturyLink or other providers specifically designated by CenturyLink for international IP service ("International Service Providers"). As defined in this SLA, a "POP" means a CenturyLink point of presence location, as determined by CenturyLink, that represents the provider edge of the CenturyLink IP network or an International Service Provider POP. "CenturyLink Provided Access" means local backbone access circuits in the continental U.S. (a) ordered and leased by CenturyLink from another carrier on Customer's behalf; or (b) provided solely on CenturyLink owned and operated facilities. This includes Special Access and Ethernet Local Access, technologies, as defined in the Local Access Service Exhibit. "Affected Service" means the particular CenturyLink IQ + Port or CenturyLink IQ + Cloud Port that fails to meet the applicable Goal. For purposes of this SLA, references to CenturyLink IQ + Ports will also refer to CenturyLink IQ + Cloud Ports. If the Affected Service is implemented as a full-mesh MPLS or VPLS topology, service degradation at one Customer location potentially impacts all end to end metrics because all sites are connected to all other sites. In the event that a service degradation on such CenturyLink IQ + Port causes a Goal to not be met on multiple end to end location paths, the "Affected Service" refers to the CenturyLink IQ+ Port common to each missed end to end metric.

1.2 Regions. A list of international regions (including Customer Service Center support information) and corresponding Tiers is appended to this SLA as Attachment 1, located at <http://www.centurylink.com/legal>.

Domestic Regions	SLA Components:
Intra U.S.	The CenturyLink IP network within the 48 contiguous U.S. states
Hawaii to U.S. West Coast ("Hawaii")	CenturyLink Trans-Hawaii IP network to the continental U.S. CenturyLink IP network in the Los Angeles Metro Area
Alaska to U.S. Pacific Northwest ("Alaska")	CenturyLink Trans-Alaska IP network to the continental U.S. CenturyLink IP network in the Seattle Metro Area

2. Goals.

2.1 Domestic Network and Port-Related Goals. The following domestic service level goals ("Goals") apply to CenturyLink IQ + Ports purchased from CenturyLink pursuant to an agreement. If a Bandwidth Tier applies, Goals for CenturyLink IQ + Ports only apply to the portion of traffic that is within the contracted Bandwidth Tier and will not apply to the CenturyLink IQ Networking Port bandwidth usage that exceeds the Bandwidth Tier. The Goals associated with Latency, Packet Delivery and Jitter are measured using monthly averages from the CenturyLink IP network and apply in the listed regions after the CenturyLink IQ + Ports have been accepted for use. Individual circuit outages of MLPPP (NxDS1) bundles are not subject to the Network Availability or Reporting Goals. International Goals for Availability, Latency, Packet Delivery, and Jitter are appended to this SLA in Attachment 1.

(a) Network Availability. The availability of the Service ("Network Availability") is measured by "Network Downtime," which exists when a particular CenturyLink IQ + Port of Customer is unable to transmit and receive data. Network Downtime is measured from the time a trouble ticket is opened by CenturyLink in the CenturyLink trouble management system to the time the affected CenturyLink IQ + Port is again able to transmit and receive data.

Region	Goal	Remedy (Credit is applied to Century IQ + Port MRC of the Affected Service)*
Intra U.S. Hawaii Alaska	100%	Each cumulative hour of Network Downtime qualifies Customer for a credit of one day's charges pro-rated from the CenturyLink IQ + Port MRC.

(b) Latency. The average network transit delay ("Latency") will be measured via roundtrip pings on an ongoing basis every five minutes to determine a consistent average monthly performance level for Latency between customer edge (CE) locations within the region. Latency is calculated as follows:

$$\text{Target Latency Goal} = \text{Minimum Latency} + (\text{Per Mile Latency} * \text{Round Trip Miles} * \text{Between Customer Edges})$$

Region	Minimum Latency	Per Mile Latency	If Goal Exceeded By		
Intra U.S.	20ms	.02ms	1-10ms	11-20ms	>20ms
Credit as % of CenturyLink IQ + Port MRC of Affected Service*			10%	20%	30%

To simplify calculations, air miles are used to generate latency targets. For example, if location A is 100 air miles from location B (i.e. 200 miles roundtrip) the latency target would be 20ms + (.02 ms * 200) = 24 ms. Route miles are used in lieu of air miles only when the number of route miles is greater than 2x the number of air miles.

*subject to requirements and limitations in Section 4

**CENTURYLINK IQ® +
RETAIL SERVICE LEVEL AGREEMENT**

(c) **Packet Delivery.** Packet Delivery will be measured on an ongoing basis every five minutes to determine a consistent average monthly performance level for packets actually delivered between the POPs.

Region	Goal	Remedy (Credit is applied as a % of the Century IQ + Port MRC for the Affected Service)*		
Intra U.S. Hawaii Alaska	99.90%	99.01 % - 99.89% = 10%	90% - 99% = 25%	Less than 90% = 50%

(d) **Jitter.** Jitter is a measurement of the interpacket delay variance and packet loss in the CenturyLink IP network, which is measured by generating synthetic user datagram protocol (UDP) traffic.

Region	Goal	Remedy (Credit is applied as a % of the Century IQ + Port MRC for the Affected Service)*		
Intra U.S.	2 ms	2.1 – 3 ms = 10%	3.1 – 4 ms = 25%	Greater than 4 ms = 50%
Hawaii Alaska	4 ms	4.1 – 5 ms = 10%	5.1 – 6 ms = 25%	Greater than 6 ms = 50%

(e) **Reporting.** The Reporting Goal is measured from the time a Network Downtime trouble ticket is opened to the time CenturyLink reports the Network Downtime to Customer by the agreed upon notification method. This Goal does not apply to Ports that use Ethernet Local Access.

Region	Goal	Remedy (Credit is applied to Century IQ + Port MRC of the Affected Service)*
Intra U.S. Hawaii Alaska	10 minutes	Each failure to meet the Goal qualifies Customer for a credit of one day's charges pro-rated from the CenturyLink IQ + Port MRC, at a maximum of one such credit accrued per day.

(f) **Installation.** The Installation Goal measures the installation times for CenturyLink Provided Access ordered in conjunction with CenturyLink IQ + Ports only. The Installation Goal only applies if there are existing CenturyLink facilities in the location that supports the Affected Service. Installation is measured from the date CenturyLink Engineering accepts the CenturyLink Provided Access order. If Customer has a designated Key Port, the applicable Installation Goal shown below will apply to that Key Port, and the installation of related non-Key Ports will occur the later of: (i) within 10 business days after that Key Port's Start of Service Date; or (ii) within the normal Installation Goal for that Port, as measured from the date CenturyLink Engineering accepts the order. If no Key Port is designated, CenturyLink will follow normal installation intervals without special sequencing.

Region	Goal	Remedy (Credit is applied to Century IQ + Port MRC of the Affected Service)*
Intra U.S.	DS-1	22 business days
	DS-3 OC-3 OC-12	33 business days
	Ethernet 10 – 1000 Mbps	66 business days
Hawaii Alaska	DS-1	22 business days
	DS-3 OC-3 OC-12	43 business days

3. Maintenance.

3.1 Network Normal Maintenance. "Normal Maintenance" means upgrades of hardware or software or upgrades to increase capacity. Normal Maintenance may temporarily degrade the quality of the Service, including possible outages. "Local Time" means the local time in the time zone in which an Affected Service is located. CenturyLink may change the maintenance window times upon posting to the website or other notice to Customer. CenturyLink will undertake Normal Maintenance during the hours and upon the prior notice time period stated below. International Maintenance hours are located in Attachment 1 to this SLA.

Region	Normal Maintenance Hours	Prior Notice
Intra U.S. Hawaii Alaska	Sunday, Tuesday, and Thursday mornings between the hours of 12:00 midnight and 6:00 AM Local Time	10 business days

3.2 Network Urgent Maintenance. "Urgent Maintenance" means efforts to correct network conditions that are likely to cause a material Service outage and that require immediate action. Urgent Maintenance may degrade the quality of the Services, including possible outages. Such effects related to Urgent Maintenance will entitle Customer to service credits as set forth in this SLA. CenturyLink may undertake Urgent Maintenance at any time deemed necessary and will provide notice of Urgent Maintenance to Customer as soon as is commercially practicable under the circumstances.

*subject to requirements and limitations in Section 4

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4. General.

4.1 Remedies. To be eligible for service credits, Customer must be in good standing with CenturyLink and current in its obligations. To receive service credits, Customer must contact the Customer Service Center at 1-800-860-1020 and submit the relevant trouble ticket information within 30 calendar days from the date when the relevant SLA Goal was not met. CenturyLink will determine the credits provided to Customer by applying the applicable remedies set forth in this SLA. A credit will be applied only to the month in which the event giving rise to the credit occurred. The credits will apply to the CenturyLink IQ + Port MRCs of the Affected Service after application of all discounts. The maximum service credits for CenturyLink IQ + Service issued in any one calendar month will not exceed: (a) for Goals related to Network Availability, Reporting, and Installation, seven days' charges pro-rated from the CenturyLink IQ + Port MRC of the Affected Service; or (b) for Goals not listed in (a), 50% of the CenturyLink IQ + Port MRCs of the Affected Service less any credits calculated under (a). In no event will the total credit, in the aggregate for all credits issued in one month for CenturyLink IQ + Service exceed the equivalent of 50% of the relevant CenturyLink IQ + Port MRCs for the Affected Service. Cumulative credits in any one month must exceed \$25.00 to be processed. If Customer fails to notify CenturyLink in the manner set forth above with respect to the applicable SLA credits, Customer will have waived its right to such SLA credits for that month.

4.2 Limitations. This SLA will not apply, and Customer will not be entitled to receive a credit or exercise a termination right under this SLA, for any event that adversely impacts the Service that is caused by: (a) the acts or omissions of Customer, its employees, contractors or agents or its end users; (b) the failure or malfunction of equipment, applications or systems not owned or controlled by CenturyLink or its International Service Providers; (c) Force Majeure Events; (d) scheduled service maintenance, alteration or implementation; (e) the unavailability of required Customer personnel, including as a result of failure to provide CenturyLink with accurate, current contact information; (f) CenturyLink's lack of access to the Customer premises where reasonably required to restore the Service; (g) Customer's failure to release the Service for testing or repair and continuing to use the Service on an impaired basis; (h) CenturyLink's termination of Service for Cause or Customer's use of Service in an unauthorized or unlawful manner; or (i) improper or inaccurate network specifications provided by Customer.

4.3 Customer Termination Rights. In the Intra U.S., Hawaii, and Alaska regions, Customer may terminate the Affected Service without Cancellation Charges if, in any single calendar month: (a) Network Downtime exists for at least 24 hours in the aggregate; or (b) Network Downtime exists for a period of at least eight consecutive hours. Customer may terminate the Affected Service by providing written notice to the Customer Service Center with a courtesy copy to the attention of CenturyLink's General Counsel within 20 days after either one of the Network Downtime events described in subsections (a) or (b) above occur. Such termination will be effective 45 days after receipt of written notice by CenturyLink. For all other regions, Customer may terminate the Affected Service without early termination charges if CenturyLink is unable to restore the Affected Service to meet the Goals herein within a 60 day cure period. The 60 day cure period will begin after a trouble ticket is opened. Customer may terminate the Affected Service by providing written notice to the Customer Service Center with a courtesy copy to the attention of CenturyLink's General Counsel within 20 days after the 60 day cure period ends. Such termination will be effective upon receipt of written notice by CenturyLink of termination from Customer, unless Customer requests Service to be continued during a transition period and establishes a new termination date. Customer is responsible for all Service charges until the termination date. If Customer fails to notify CenturyLink in the manner set forth in this section with respect to the applicable termination right, Customer will have waived its right to terminate the Affected Service.



CenturyLink
1600 7th Avenue,
Seattle, Washington 98191
(206) 345-6224

Philip Grate
State Regulatory Affairs Director
Public Policy

Via E-mail

May 18, 2017

Andy Leneweaver
Deputy State E911 Coordinator for Enterprise Services
Washington State E911 Coordinator's Office
20 Aviation Drive
Camp Murray, WA 98430

Mr. Leneweaver:

Provided below is a report compiled at my request by our network outage team regarding CenturyLink's transport shelf failure in The Dalles, OR on November 6, 2016 that affected Washington customers.

Overview

On November 6, 2016 at 2:50 a.m. (PST), CenturyLink began experiencing issues on a transport shelf in The Dalles, OR office that impacted the Klickitat and Skamania County Public Safety Answering Points (PSAPs). As a result of these issues, a CenturyLink Technician was dispatched to The Dalles office and initiated trouble shooting efforts. While the Technician was able to restore the impacted facilities to a simplex condition at 2:40 p.m., it was ultimately determined that the shelf could not be repaired to restore service to duplex. Therefore, plans were made to redesign and move the impacted circuits to a new platform later that week.

Unfortunately, at 6:00 p.m. that day, service again failed. The impacted cards were then moved to slots on the other side of the shelf, and service temporarily restored at 11:00 p.m. CenturyLink also brought a new controller to The Dalles office and attempted to power the impacted multiplexer down and up. Unfortunately, the multiplexer would not re-start. In an effort to restore service as quickly as possible, CenturyLink initiated work to build a temporary new system so that circuits could be groomed to it. Once the system was built, circuit grooming began and service started restoring at 12:33 p.m. on November 7, 2016. All service was restored to simplex when the circuit grooming was complete at 3:40 p.m. On November 17, 2016 work was completed to restore the service to duplex.

Service Impacts:

- 18,946 CenturyLink customers and 83,456 non-CenturyLink customers served by the Klickitat County PSAP were 911 isolated on November 6, 2016 from 8:00 a.m. until they were rerouted at 11:05 a.m.

- CenturyLink's Central Office in White Salmon, WA was toll isolated on November 6, 2016 from 2:50 a.m. to 2:40 p.m., which resulted in 911 services being unavailable for 1,792 customers during this time.
- 5,506 CenturyLink customers served by the Skamania County PSAP were 911 isolated from 3:06 a.m. to until they were rerouted at 5:02 a.m.
 - CenturyLink's Central Offices in White Salmon, WA, Willard, WA and Stevenson, WA were toll isolated on November 6, 2016 from 2:50 a.m. to 2:40 p.m., which resulted in 911 services being unavailable for 3,259 customers during this time.
- CenturyLink was unable to determine the number of 911 test calls.

Additional Information

- The Dalles, OR and White Salmon, WA are served by both Klickitat **and** Skamania County PSAPs.

If you have any questions regarding this report, please don't hesitate to contact me.

Sincerely,

Phil Grate