

CenturyLink
1600 7th Avenue, Room 1506
Seattle, Washington 98191
(206) 345-1568
Facsimile (206) 343-4040

Mark S. Reynolds
Northwest Region Vice President
Public Policy

*Via E-mail and
Overnight Delivery*

April 24, 2014

Mr. Steven V. King, Executive Director and Secretary
Washington Utilities & Transportation Commission
1300 S. Evergreen Park Drive SW
P.O. Box 47250
Olympia, WA 98504-7250

Re: Docket No. UT-140597
Major Outage Report - 04/10/2014 Next Generation 911 System Outage

Dear Mr. King,

The following information is being provided in response to CenturyLink's requirement to file a major outage report according to Washington Administrative Code (WAC) 480-120-439:

Overview

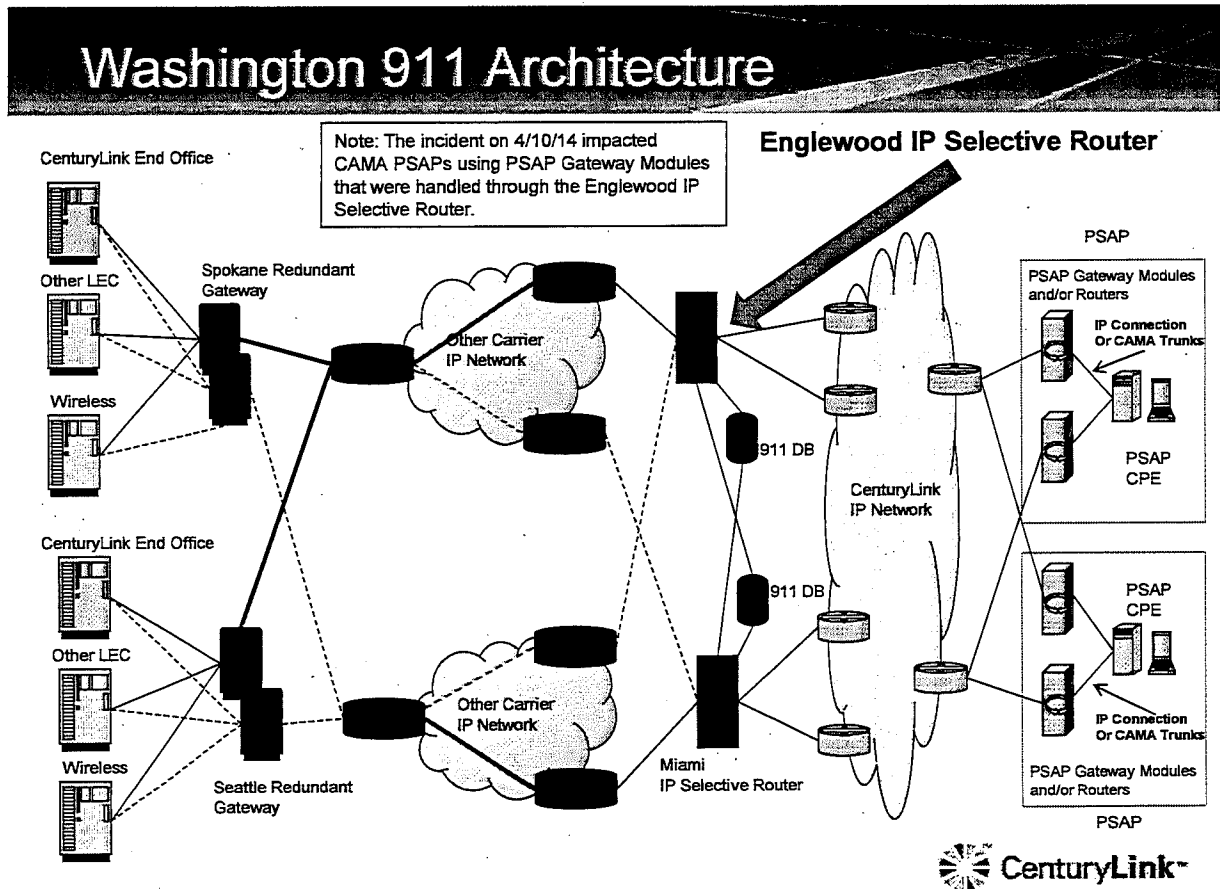
Between 11:45 p.m. (PST) on April 9th and 6:06 a.m. on April 10th, the Washington NG 911 system experienced an outage that was caused by a technical error in an Intrado call router which prevented the system from properly processing calls. During the outage period, approximately 770 911 calls completed and 4,500 failed. The outage occurred across 127 Public Safety Answering Points (PSAPs) in Washington; other PSAPs successfully rerouted calls. CenturyLink and Intrado have taken steps to implement an enhanced monitoring process and have addressed the router issue. At this point, CenturyLink's NG 911 system has returned to normal operations.

Specific Outage Information

- 1) **Date & Time Impact Started:** April 9, 2014 at 11:54 p.m. (PST)

- 2) **Date & Time Impact Stopped:** April 10, 2014 at 6:06 a.m. (PST)
- 3) **Duration of Impact:** Approximately 6 hours and 12 minutes
- 4) **Incident Synopsis:** Intrado's PSAP Trunk Member (PTM) threshold counter in the Englewood, Colorado Emergency Call Management Complex (ECMC) exceeded its administered threshold, resulting in the system's inability to assign trunks for PSAP CAMA call delivery via the Englewood ECMC.
- 5) **Incident Impacts:** During the time of impact, all calls routed through Intrado's Englewood ECMC to PSAP CAMA destinations were impacted, and callers experienced either Fast Busy or Ring No Answer. 4,452 CenturyLink calls in the states of Washington, Minnesota and North Carolina were impacted.
- 6) **Incident Root Cause:** Intrado's PTM threshold counter in the Englewood, Colorado ECMC exceeded its administered threshold. Under normal operations for calls to PSAP CAMA destinations, this counter is incremented when a PSAP CAMA trunk is assigned for call delivery and is used as a unique identifier within the geographically distributed databases.
 - a. When the threshold counter reached capacity, no additional database entries to reserve a PSAP CAMA trunk could be created, resulting in the inability to assign a trunk for call delivery.
 - b. The system is geographically redundant and is designed to failover between core processing sites. This situation occurred at a point in the application logic that was not designed to perform any automated corrective actions. The situation at the Englewood ECMC did not affect the processing at Intrado's Miami ECMC. Intrado initiated manual failover of all call processing to Miami, Florida ECMC when the issue was diagnosed.
- 7) **Intrado Corrective Action(s):**
 - a. The PTM threshold has been increased for both ECMCs so that it is not theoretically possible to exhaust the threshold ranges.
 - b. An enhanced alarming system has been implemented with a specific, identifiable alarm for when the PTM threshold is reached.
 - c. Periodic manual checks of the counter are being performed.
 - d. Intrado technical teams are actively engaged in an A9-1-1 architecture review.
- 8) **Intrado/CenturyLink Joint Follow up Action(s):**
 - a. Network Operations Center (NOC) to NOC partnership session to work through NOC to NOC challenges and establish or clarify process changes.
 - b. Joint review of ingress trunking configuration to distribution between ECMC Processing sites.

9) Diagram of the Washington Next Generation 911 network



10) Approved Media Statements & Talking Points

a. April 11, 2014 at 8:32 a.m. (PST):

CenturyLink experienced a service interruption in Washington and Oregon today. At this time, 911 services have been restored throughout both states.

The outages in WA and OR were isolated incidents:

- In Oregon, the outage was caused by a maintenance issue that impacted approximately 16,000 people in Lincoln, Tillamook and Yamhill counties and was resolved by 3:25AM PST.
- At this time, the Washington outage is still being investigated for the root cause. CenturyLink services were restored at 6:45AM PST.

CenturyLink continues to work with the 911 centers to ensure that all issues have been resolved.

b. April 11, 2014 at 12:47 p.m. (PST):

WA.041014.003 Customer Talking Points:

- *On 4/10/14 at 1:01 a.m. (PST), CenturyLink experienced a 911 service interruption in various states due to a vendor caused failure.*
- *CenturyLink services were restored at 6:26 a.m. (PST).*
- *The vendor is in the process of investigating the root cause.*
- *CenturyLink continues to work with the vendor to ensure that all issues have been resolved.*
- *Once the vendor completes their root cause analysis, CenturyLink will provide a formal reason for outage.*

c. April 14, 2014 at 4:42 p.m. (PST):

On April 10, CenturyLink experienced a 911 outage in Washington. The outage was not caused by any failures or malfunctions of CenturyLink's network and was not related to any OpenSSL issues such as Heartbleed. The outage was due to a technical error in a third-party vendor's call router, which prevented the system from properly processing calls. CenturyLink and its vendor partner have taken steps to implement an enhanced monitoring process and have addressed the router issue. Our 911 system has been returned to normal operations and we are confident these steps have addressed this issue.

Approximately 770 911 calls were completed and 4,500 failed between 12:36 a.m. PST and 6:26 a.m., when 911 service was fully restored. This occurred across 127 public safety answering points (PSAPs) in Washington; other PSAPs successfully rerouted calls.

"CenturyLink's top priority is customer safety and reliable communications," Brian Stading, Northwest Region President said. "We are working closely with our vendor partner to fully to understand this outage. At this time, we are confident that the 911 system is fully operational and stable."

d. April 15, 2014 at 7:16p.m. (PST):

CenturyLink and Intrado, our vendor partner, are working together and are confident that the 9-1-1 system is fully operational, stable and working as designed. Intrado provides 9-1-1 services to CenturyLink through its fully redundant 9-1-1 system. The service disruption was due to an isolated issue in Intrado's system that impaired call routing, which prevented the system from properly processing calls and launching their system's redundancy.

Intrado has done three things to ensure the same 9-1-1 outage will not occur:

- 1. Resolved a software issue that prevented the proper processing of the 9-1-1 calls*
- 2. Added additional alarms and raised the visibility of the alarms within the operations control center and*
- 3. Enhanced processes to ensure similar software issues do not occur*

CenturyLink and Intrado place customer safety and reliable communications as top priorities and will continue to work together to ensure effective 9-1-1 communications.

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

Sincerely,

Mark S. Reynolds