

Kansas 911 Outage After Action Review

Origin January 29, 2018
Last Revised January 29, 2018

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Summary

What caused the outage?

- AT&T communications fiber was cut by an individual building a fence
 - Affected a variety of AT&T services, phone lines, 911 service, U-verse, etc
- AT&T technicians were immediately dispatched to begin isolating the failure and restore service
- We believe that another issue may have contributed to the service event
 - Expect to learn more as additional information is provided

How long was the outage?

- One of the first PSAP's identified a 911 service problem as early as 11:00AM Saturday 1/27/18
- Additional PSAP's reported 911 service problems in the afternoon and on into Saturday evening
- Service was generally restored (for the majority) at approximately 1:38 Sunday morning (1/28/18)

What was the circumvention?

- As PSAP's reported being off line, AT&T rerouted 911 calls to neighboring PSAP's
- Once the problem was identified to include multiple PSAP's, AT&T began reroute to PSAP admin lines
 - This allowed 911 calls to be answered by the PSAP w/o location information (ANI/ALI)
 - If the PSAP lost their admin lines as well as 911, then calls were routed to neighboring PSAP
- Some PSAP's on the south side of the state reported reduced 911 trunk capacity during this time period
 - AT&T identified 911 pathways which were not working correctly and took them off line
 - This resulted in calls completing to the South PSAP's but with reduced call capacity

Is restoration complete or temporary?

- 911 service was completely restored shortly after midnight 1/28/18

Description – Council Communication to PSAP During Event

- Council sent out Communication to PSAP's on 1/27 – 28/2018 Regarding Major Outage
 - These communication blasts went out by: E-mail, phone message & text

01-27-2018 @ 1924	We have been notified that we have a major outage currently effecting the PSAPs on the Topeka Host. At this time we have been told that a major fiber cut has created this outage. Estimated time to restoration of service is unknown at this time. If you cannot get into the Res Center to initiate reroute, contact Lesa Thye at 816-540-6393. We need to reroute to admin until we can get this fixed. We will update you with an estimated time to restoration as we get it. Thanks. Scott
01-27-	We are currently experiencing a major outage. The outage has been caused by a major fiber cut which has taken the Topeka Host down. This is also affecting our redundant CAMA connections from the South host. This means that you are probably operating on only half of

2018 @ 1948	your capacity at this point. We do not have an estimated time to restoration as of yet, but will update you as soon as we have additional information. Thanks. Scott
01- 27- 2018 @ 2045	I was just notified that the fiber splicing has been completed and that they are beginning testing of the fiber to make sure it is sound. Should be well on our way to having this problem fixed. For those on the South Host, all of the CAMA trunks that run into Topeka have been busied out so they will not ring open. You will have half of the normal capacity of 911 trunks as you normally do, but overflow to admin will occur if all of your trunks are busy if you normally overflow that way. Once this issue is resolved we will unbusy those trunks and bring them back online. Thanks. Scott
01- 27- 2018 @ 2142	We just received word that all PSAPs, with the exception of Dickinson and Clay Counties, should log back into their 911 workstations. This is to verify connectivity to the host. If you cannot get logged on, please contact the resolution center and advise them. If you cannot get in to the Res Center, call Lesa Theye at 816-714-4504.
01- 27- 2018 @ 2311	I have been informed that the Res Center is beginning removal of reroute to admin lines for all PSAPs except Dickinson Co. and Clay Co. They remain in an offline state. The information I have is that the Res Center will contact each PSAP and notify them that they are removing the reroute and will then test to ensure that the PSAP is receiving calls on the 911 equipment. Let me know if you have problems. Respond back to scott.ekberg@kansas911.org as I am not receiving replies back to these emails from the portal. A problem that we will get fixed on Monday. Sorry for all this hassle. Scott

Corrective Action

With our NG911 network, should this have happened?

- No, redundant paths should have allowed the network to stay up

Once on ESInet, could this happen again?

- Once on the ESInet there would be no change in the way the facilities serve the PSAP

- However, the ESInet intelligence would likely fix the South capacity loss issue

- ESInet could potentially route to administrative line once such an event was detected

- AT&T is preparing documentation on how ESInet would mitigate such an issue

What is the plan to avoid this incident in the future?

- AT&T to review engineering on the network to ensure comprehensive redundant paths are in place

Following a Root Cause Analysis investigation the following was determined:

A fiber cut between Salina and Abilene rendered a primary host circuit failure. An AT&T network technician then conducted intrusive testing on the redundant primary host circuit, resulting in loss of service on the Topeka Host and a reduction in service level for the Wichita Host. The root cause of the event was human error in conducting intrusive testing on the redundant circuit serving the North host. Absent the error, the event would not have occurred.

