



## **Root Cause Analysis Report**

<b>Ticket Number:</b>	18NERS272476; 18NERS272538
<b>Customer Name:</b>	Kansas NG 911 Council (Topeka Host location)
<b>Incident Start Time:</b>	Saturday, January 27, 2018 10:59am CT
<b>Incident Resolved Time:</b>	Saturday, January 27, 2018 23:44pm CT
<b>Prepared Date</b>	2/9/2018

### **Overview**

On Saturday, January 27, 2018, an outage occurred with respect to the AT&T Airbus Vesta hosted solution serving Kansas NG-911 Council. The outage initially impacted 2 PSAPs, but subsequently affected 28 PSAPs. PSAPs experienced a loss of connectivity to the AT&T Airbus Vesta hosted solution, preventing workstations from being able to process calls.

Initial investigation determined the cause of the outage as being a fiber cut at I-70 and McDowell Creek Road triggered by a farmer placing a new fence post. Subsequent investigation determined that, in addition to the fiber cut, there were other events that contributed to the outage.

The AT&T 911 Resolution Center and Technology Reliability Center rerouted 911 calls for the affected PSAPs to designated administrative lines while service restoration was in progress. Once complete, the 911 reroutes were removed and successful test calls made. Once test calls completed, normal 911 call processing resumed for the affected PSAPs.

### **Event Summary**

At approximately 11am on January 27, 2018, an AT&T fiber was cut by a farmer placing a fence post. This initial event impacted the host/remote network connectivity for Clay County PSAP and Dickinson County PSAP, as well as one of two connections between the Topeka and Wichita host locations of the AT&T Airbus Vesta hosted solution.

As restoration efforts progressed on the fiber cut, a separate trouble report was made to the AT&T AVPN maintenance center for ping failures on one of the connections between the Topeka and Wichita host locations of the AT&T Airbus Vesta hosted solution. A ticket was created for troubleshooting. The trouble ticket was mistakenly created against a working circuit rather than the impacted circuit. As a result, intrusive testing was performed on a working circuit, isolating the Airbus Vesta host equipment in the Topeka host location from the Airbus Vesta host equipment in the Wichita host location. When this



occurred, the PSAPs served by this hosted solution experienced a loss of redundant connectivity to the host locations.

Additionally as a result of the fiber cut, at approximately 18:20 a fiber multiplexer card (Dense Wave Division Multiplexer (DWDM) AMP Card) failed in the Salina, Kansas Central office. The failure of this card resulted in loss of connectivity for 28 PSAPs to the AT&T Airbus Vesta hosted solution.

The DWDM AMP card was replaced at 23:34 CT and all intrusive testing completed at 23:44 CT. Once these efforts were completed, connectivity between the host locations and the remote PSAPs restored.

### **Root Cause**

This was a multi-layered event.

- 1) The fiber cut and resulting loss of the DWDM AMP card in the Salina Central office impacted the PSAPs connectivity to the AT&T Airbus Vesta hosted solution.
- 2) Intrusive testing of a working circuit through incorrect circuit identification reporting, impacting the redundancy between the Topeka and Wichita host locations.

### **Corrective Action**

AT&T is currently investigating and correcting any improper records that led to an incorrect circuit being reported and intrusively tested.

AT&T has established emergency routes between the Topeka and Wichita host locations of the AT&T Airbus Vesta hosted solution to improve PSAP access to either host in the event of host isolation.



## **PSAPs Impacted**

Anderson County PSAP  
Andover Police PSAP  
Cheyenne County PSAP  
Clay County PSAP  
Cloud County PSAP  
Colby Police PSAP  
Dickinson County PSAP  
Ellis County PSAP  
Ellsworth County PSAP  
Jewell County PSAP  
Labette County PSAP  
Mitchell County PSAP  
Morris County PSAP  
Nemaha County PSAP  
Ness County PSAP  
Norton County PSAP  
Oakley Police PSAP (Logan/Gove County)  
Ottawa County PSAP  
Rawlins County PSAP  
Reno County PSAP  
Republic County PSAP  
Rush County PSAP  
Russell County PSAP  
Sabetha Police PSAP  
Salina Police PSAP  
Sheridan County PSAP  
Sherman County PSAP  
Wallace County PSAP