

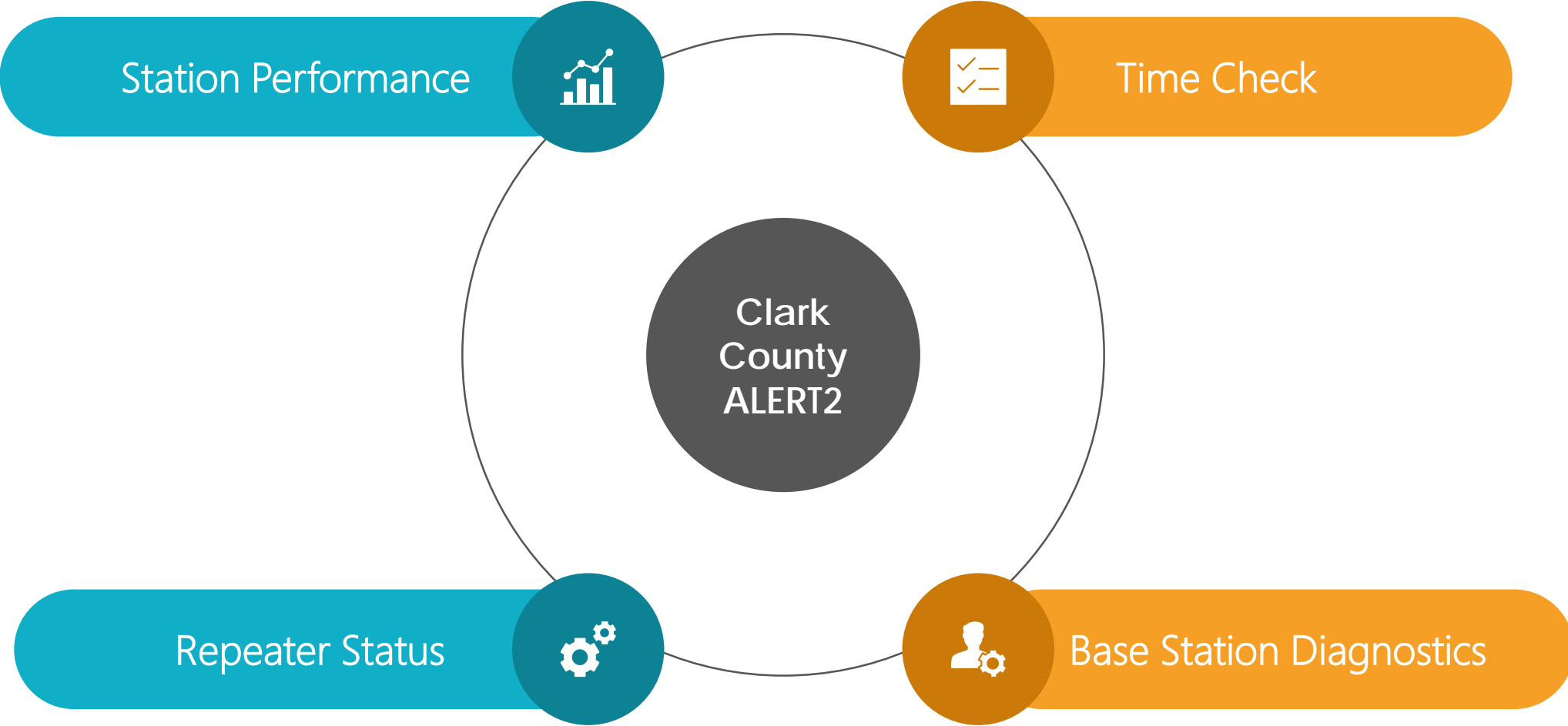
AUG Workshop 2019

ALERT2 Analytics

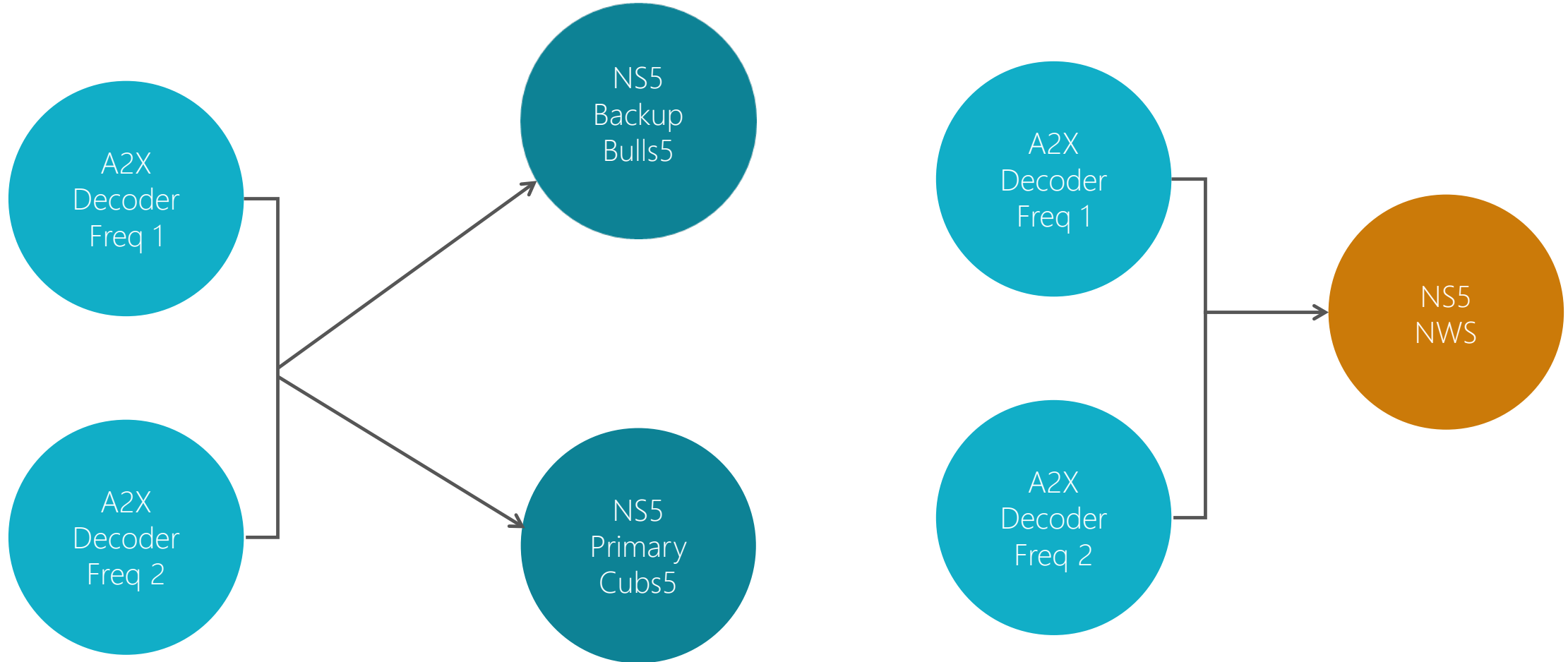
TriLynx Systems, LLC

Markus Ritsch, P.E.

ALERT2 Analytics



Clark County, NV



Time Check



SCHEDULED PROCESS

Runs once per day
from the system
scheduler and emails a
report showing system
clock times of all
network components

System Times:

Hostname	IP Address	TimeStamp
NovastarHost1:	cubs5-64	Mon Sep 30 08:30:25 PDT 2019
NovastarHost2:	bulls5-64	Mon Sep 30 08:30:24 PDT 2019
NovastarHost3:	63.239.71.242	Mon Sep 30 08:30:26 PDT 2019
A2XHost1:	172.20.227.201	Mon Sep 30 15:30:26 UTC 2019
A2XHost2:	172.20.227.202	Mon Sep 30 15:30:27 UTC 2019

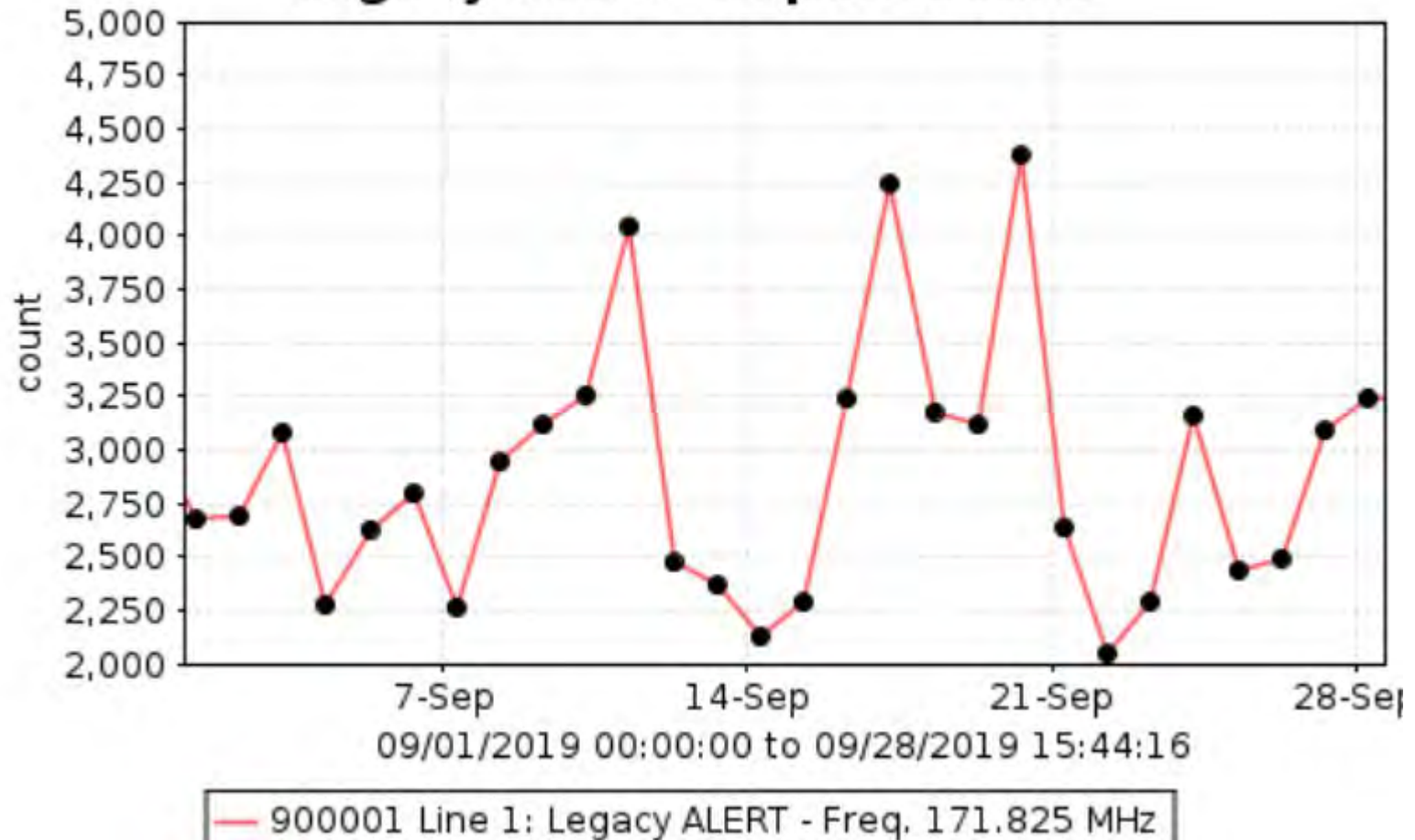
Base Station Diagnostics



SCHEDULED PROCESS

Runs once per day from the system scheduler and quantifies data reception at the base station

Legacy ALERT Report Count



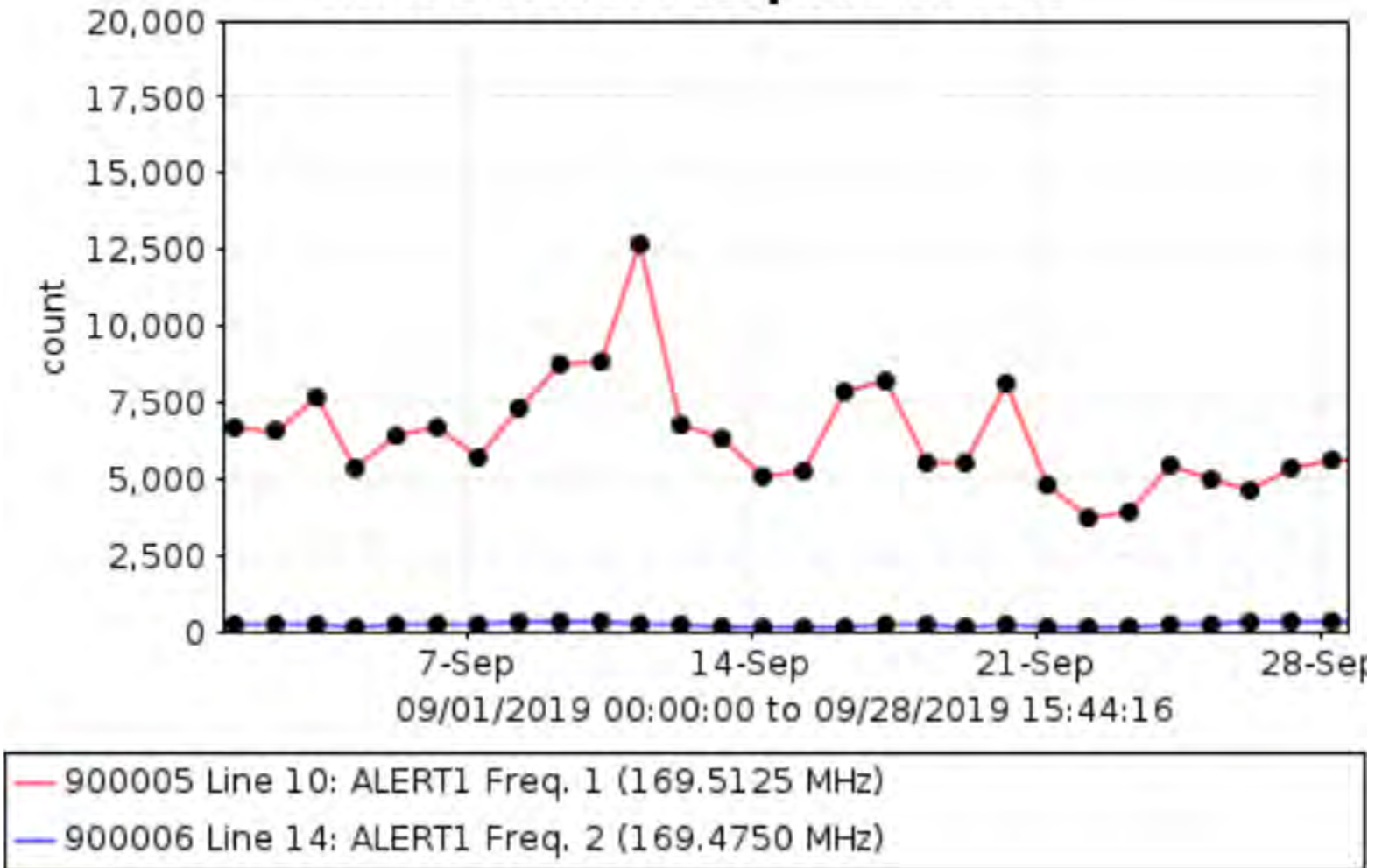
Base Station Diagnostics



SCHEDULED PROCESS

Runs once per day from the system scheduler and quantifies data reception at the base station

Concentrator Report Count



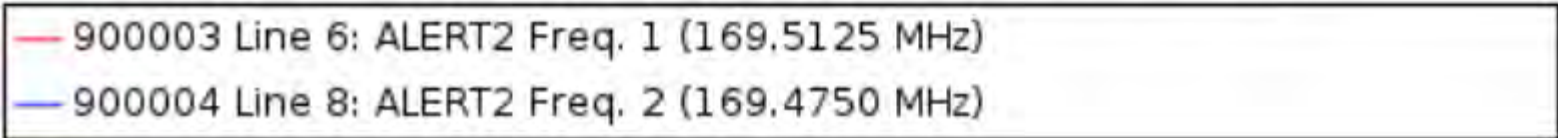
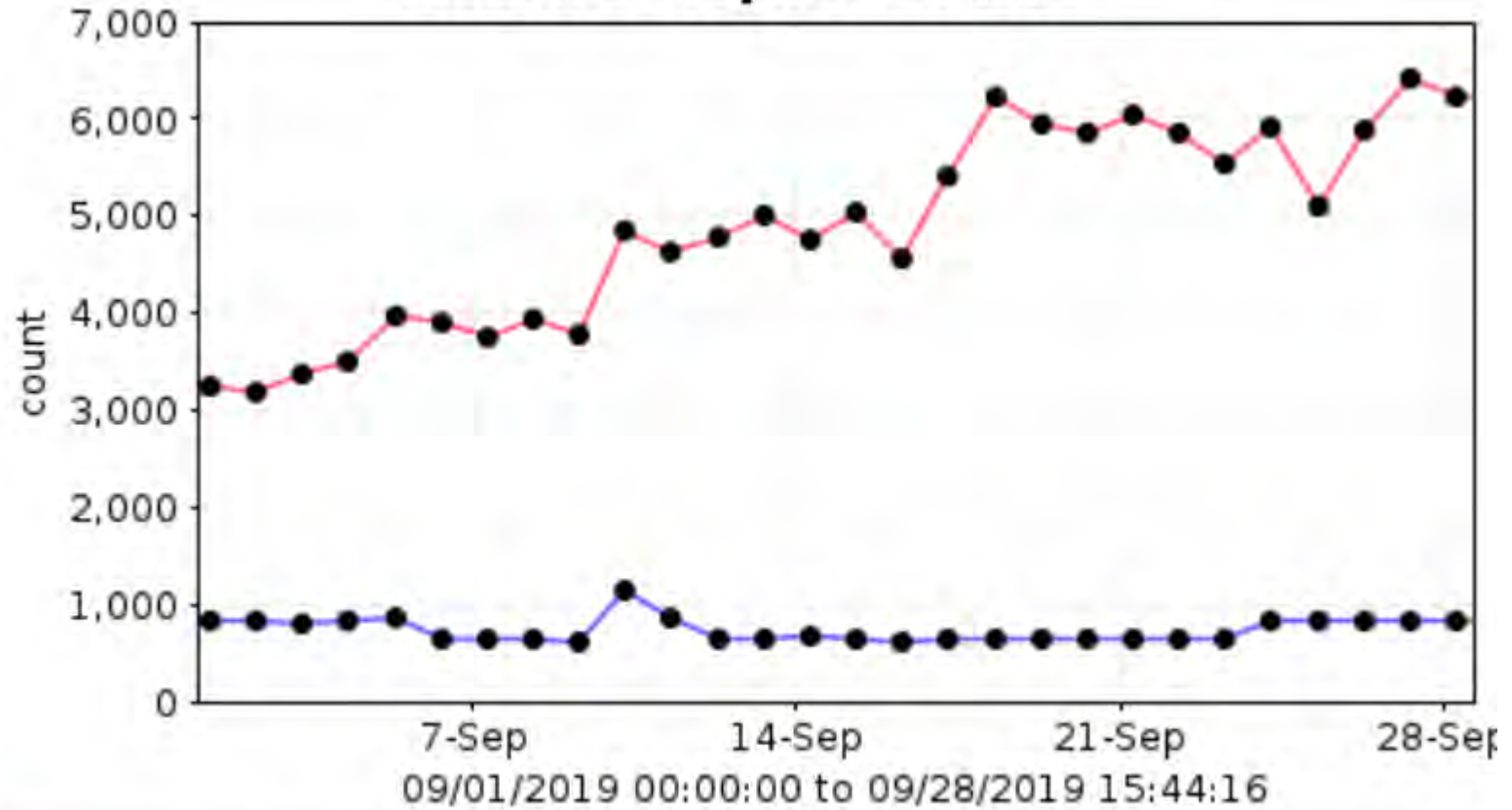
Base Station Diagnostics



SCHEDULED PROCESS

Runs once per day from the system scheduler and quantifies data reception at the base station

ALERT2 Report Count

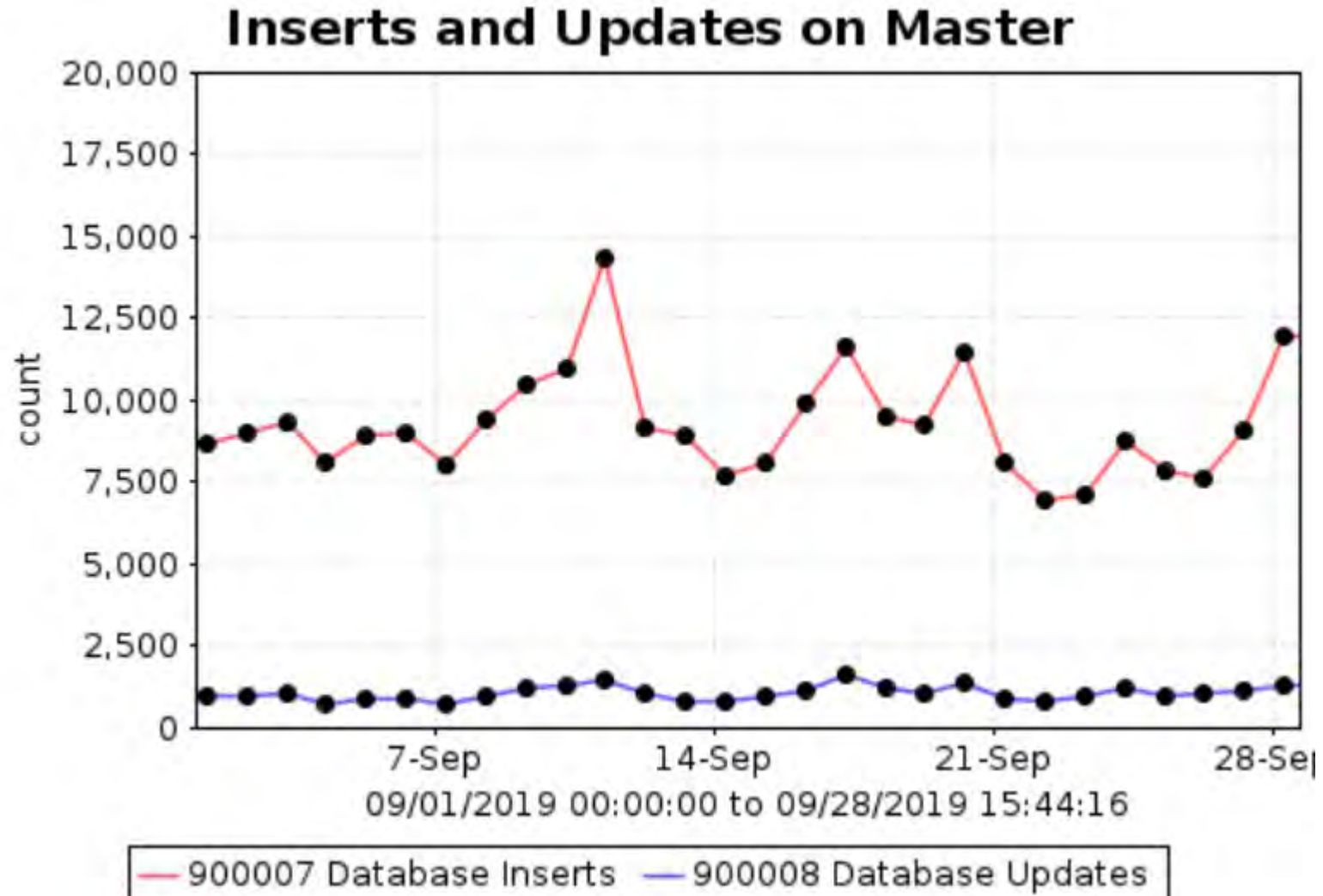


Base Station Diagnostics




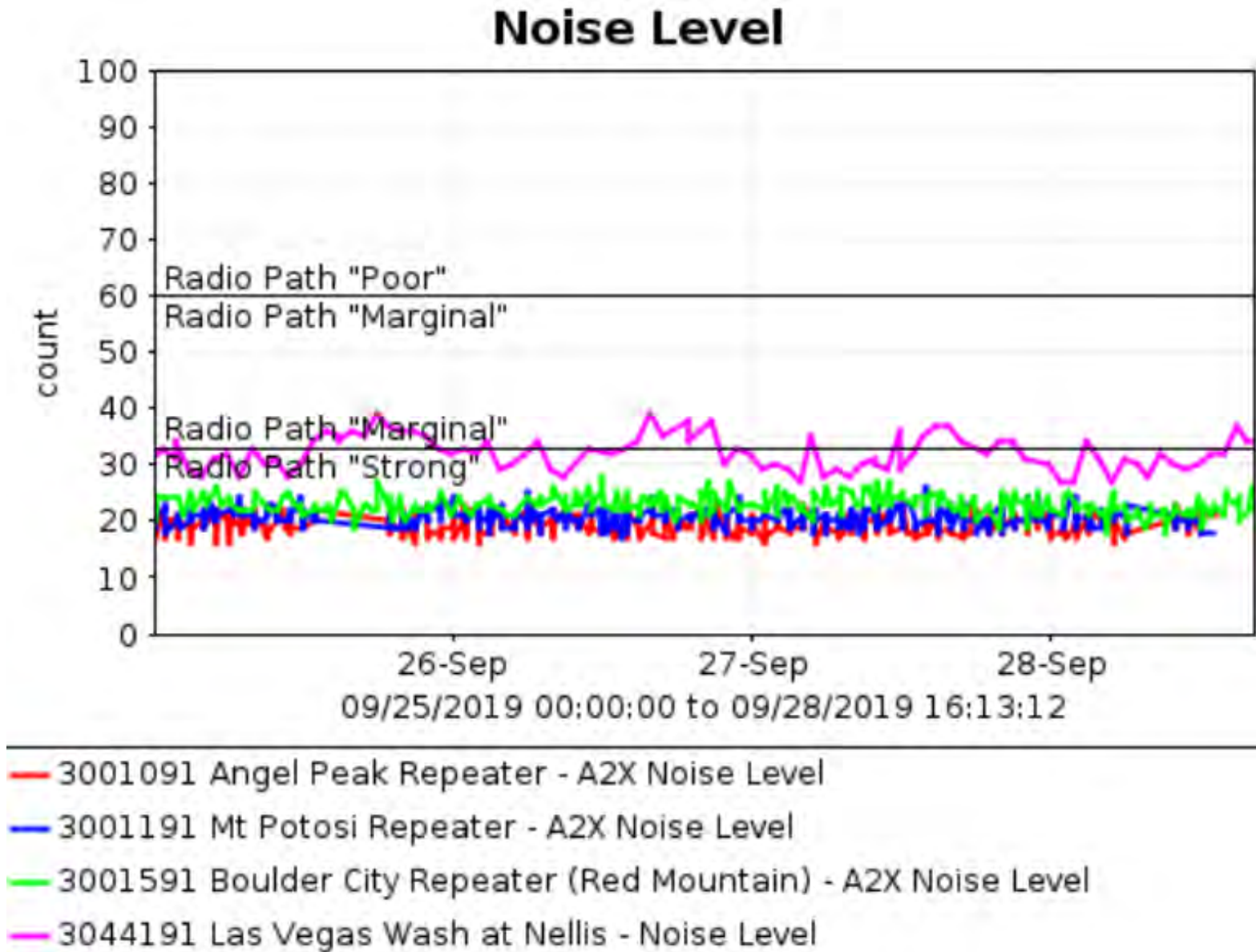
SCHEDULED PROCESS

Runs once per day from the system scheduler and quantifies data reception at the base station



Base Station Diagnostics


**SCHEDULED
PROCESS**
Noise level of received
ALERT2 packets
received by the base
decoder

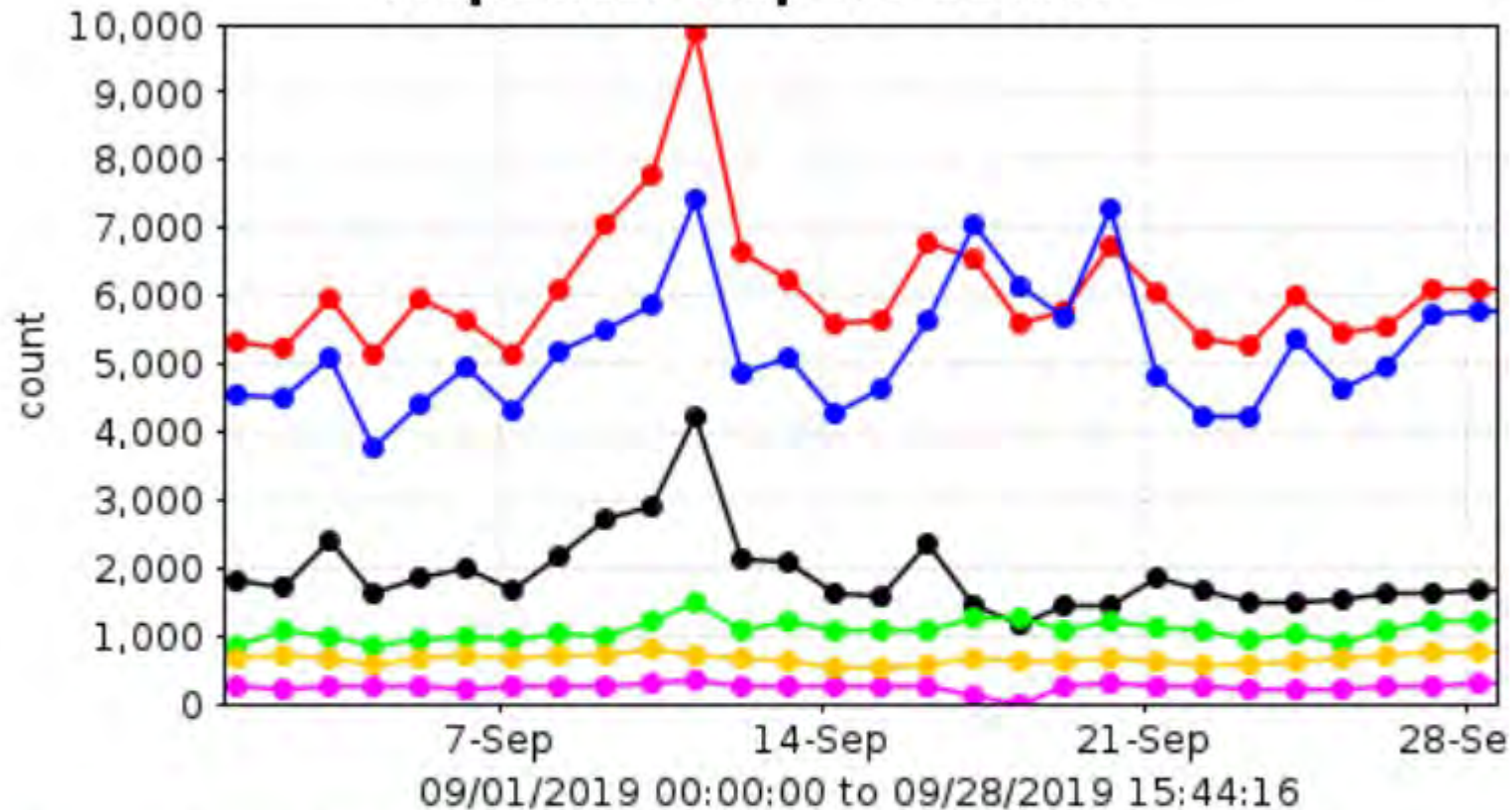




SCHEDULED PROCESS

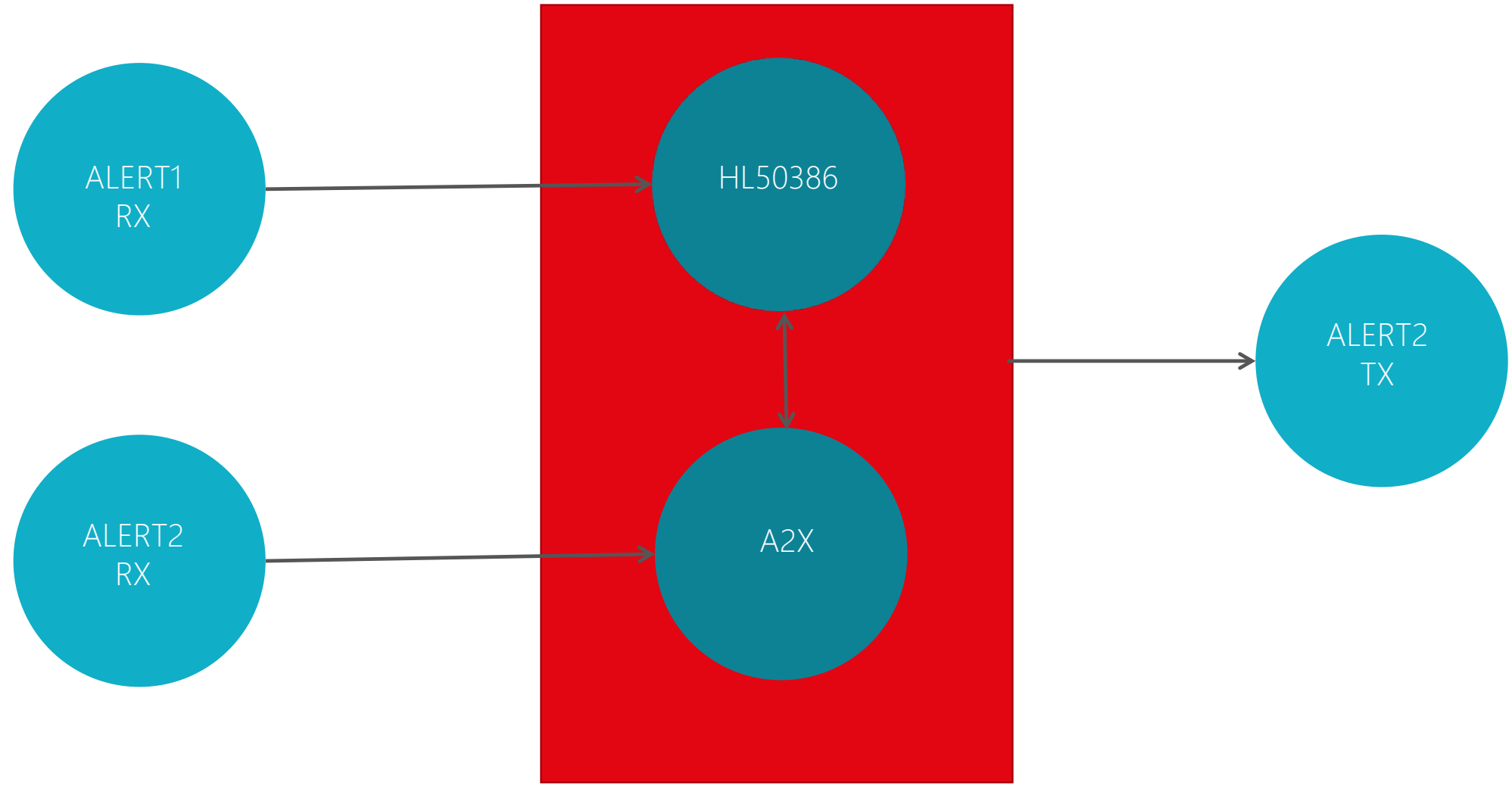
Daily quantification of
reports received from
each repeater

Repeater Report Count



- 900010 Angel Peak Repeater report count (log file SA count)
- 900011 Mt Potosi Repeater report count (log file SA count)
- 900012 Virgin Peak Repeater report count (log file SA count)
- 900013 Wildcat Wash report count (log file SA count)
- 900014 Spirit Mountain report count (log file SA count)
- 900015 Boulder City Repeater report count (log file SA count)

• Repeater HL50386/A2X •

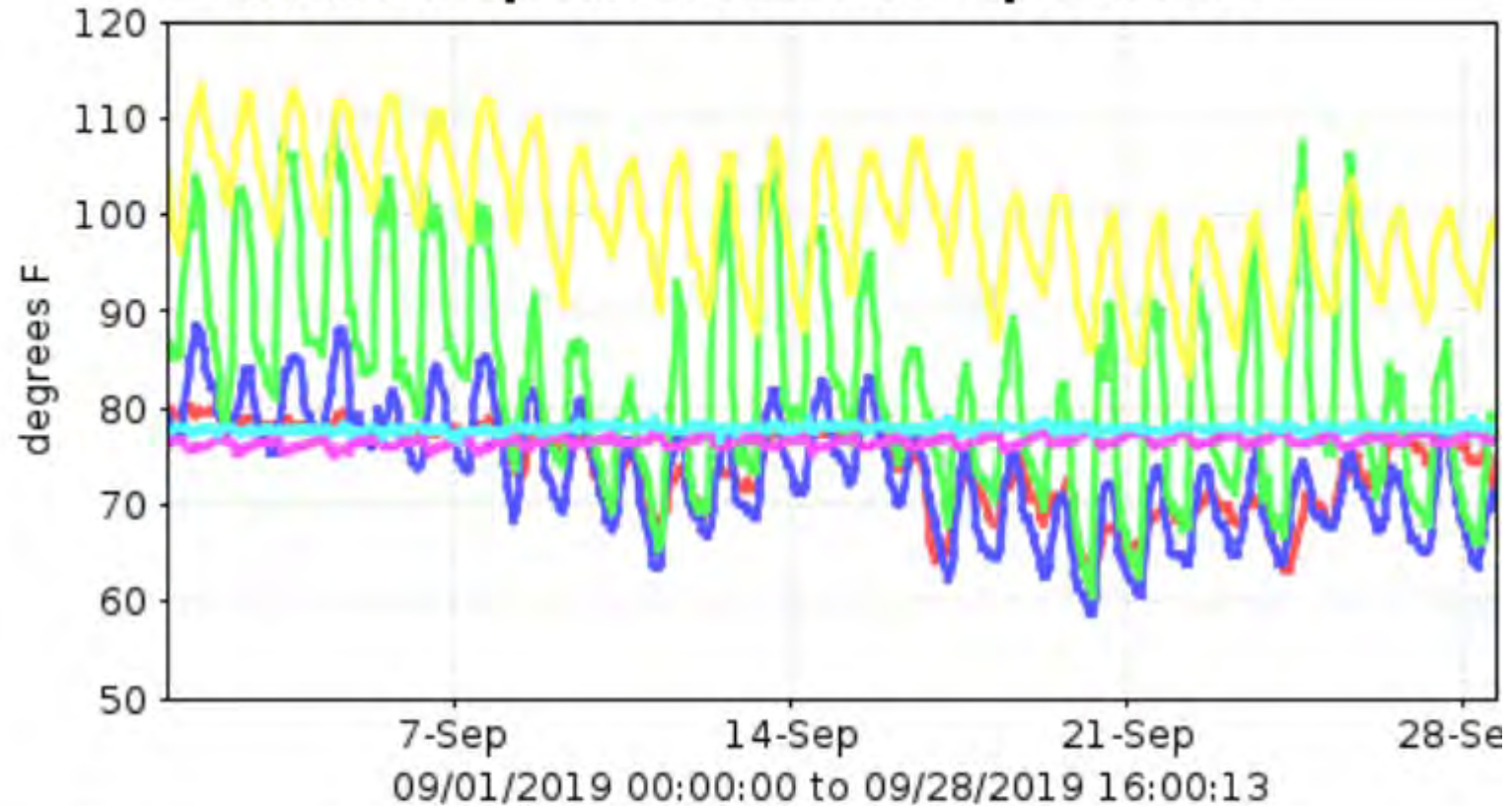




A2X RADIO REPEATER DIAGNOSTICS

Internal temperature
from each repeater
A2X board

Radio Repeater A2X Temperature



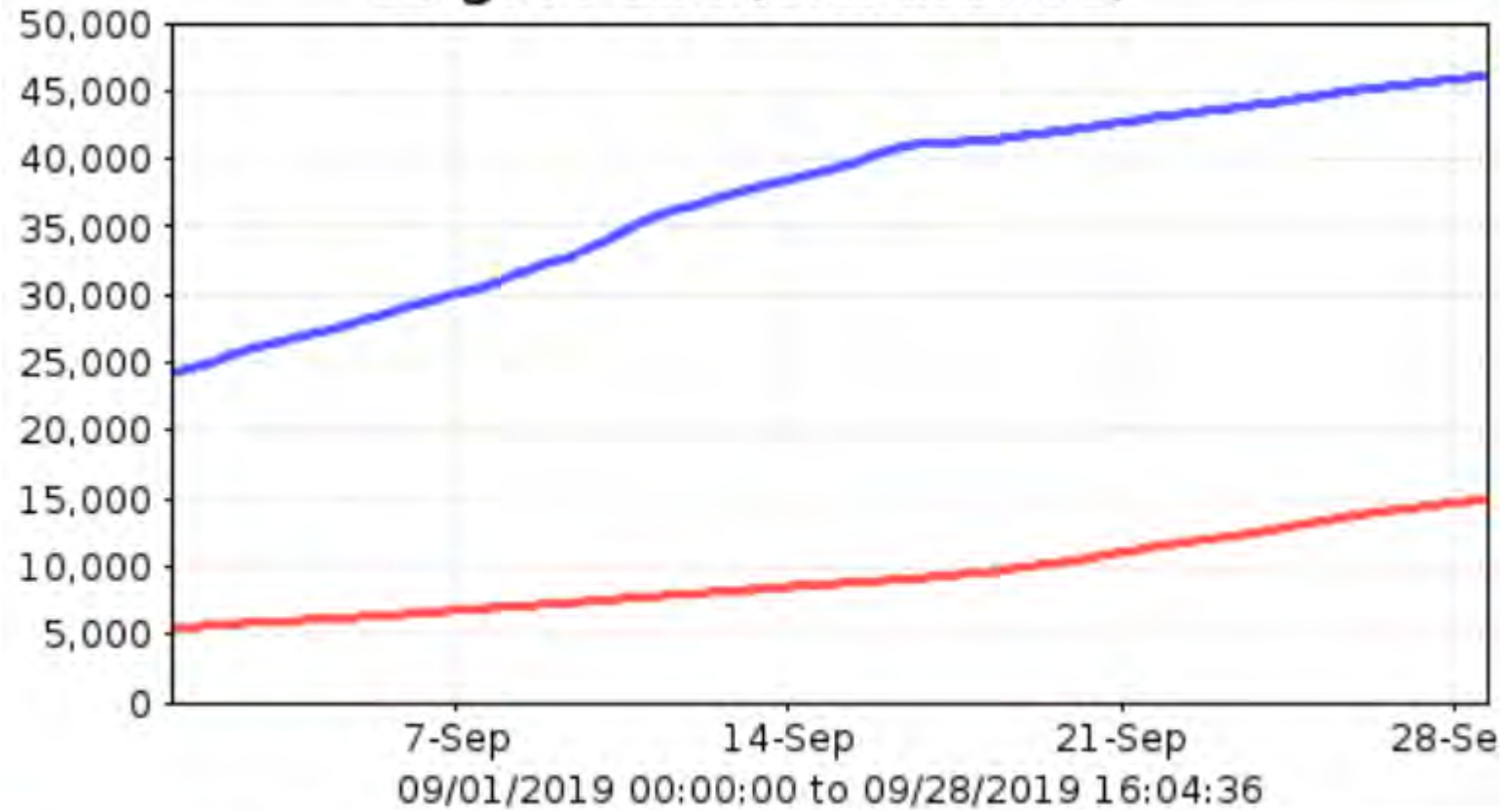
- 3001094 Angel Peak Repeater - A2 A2X Internal Temperature
- 3001194 Mt Potosi Repeater A2X Internal Temperature
- 3001294 Virgin Peak Repeater A2X Internal Temperature
- 3001394 Wildcat Wash A2X Internal Temperature
- 3001494 Spirit Mountain (Christmas Tree Pass) A2X Internal Temperature
- 3001594 Boulder City Repeater (Red Mountain) A2X Internal Temperature



A2X RADIO REPEATER DIAGNOSTICS

Data received and sent
from the A2X at each
repeater

Virgin Peak (cumulative)



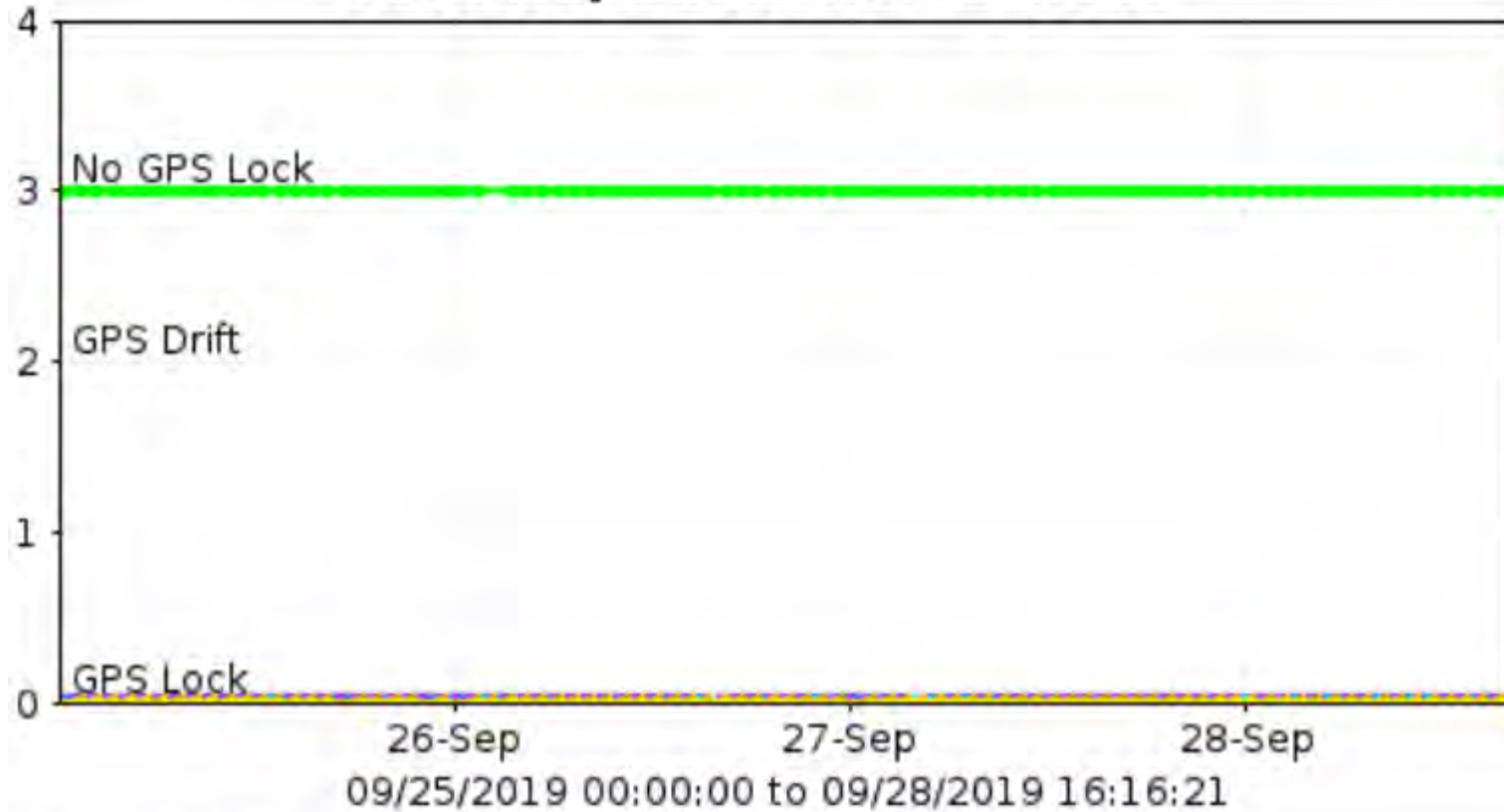
- 3001293 Virgin Peak Repeater A2X Messages Received
- 3001292 Virgin Peak Repeater A2X Messages Sent



A2X RADIO REPEATER DIAGNOSTICS

GPS status of the A2X
at each repeater

A2X Repeater GPS Status



- 3001096 Angel Peak Repeater - A2 A2X GPS Lock
- 3001196 Mt Potosi Repeater A2X GPS Lock
- 3001296 Virgin Peak Repeater A2X GPS Lock
- 3001396 Wildcat Wash A2X GPS Lock
- 3001496 Spirit Mountain (Christmas Tree Pass) A2X GPS Lock
- 3001596 Boulder City Repeater (Red Mountain) A2X GPS Lock

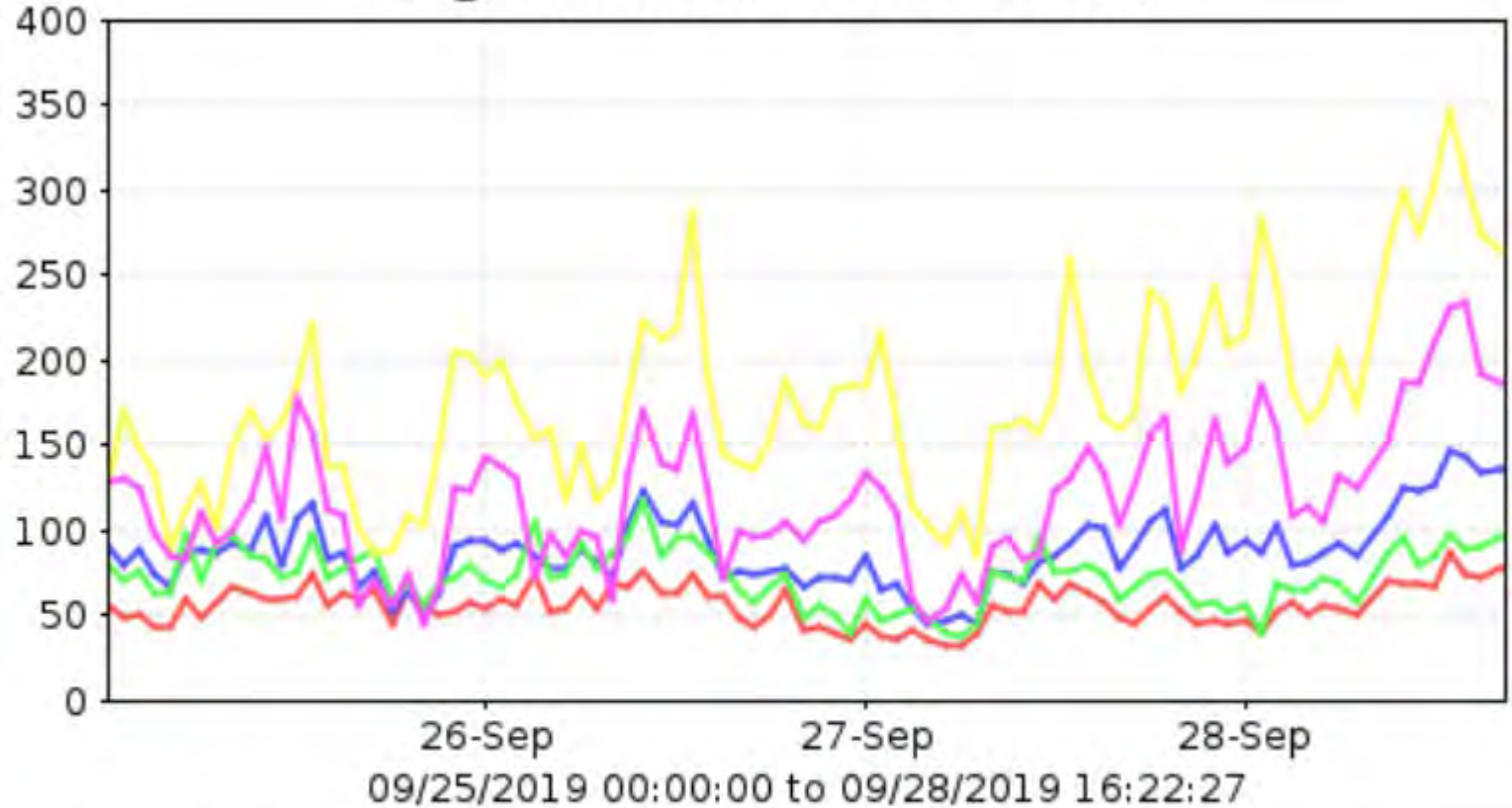


HL50386 RADIO REPEATER DIAGNOSTICS

HL50386 Repeater
input and output totals
on an hourly basis:

ALERT2
ALERT1

Angel Peak (1 hour total)



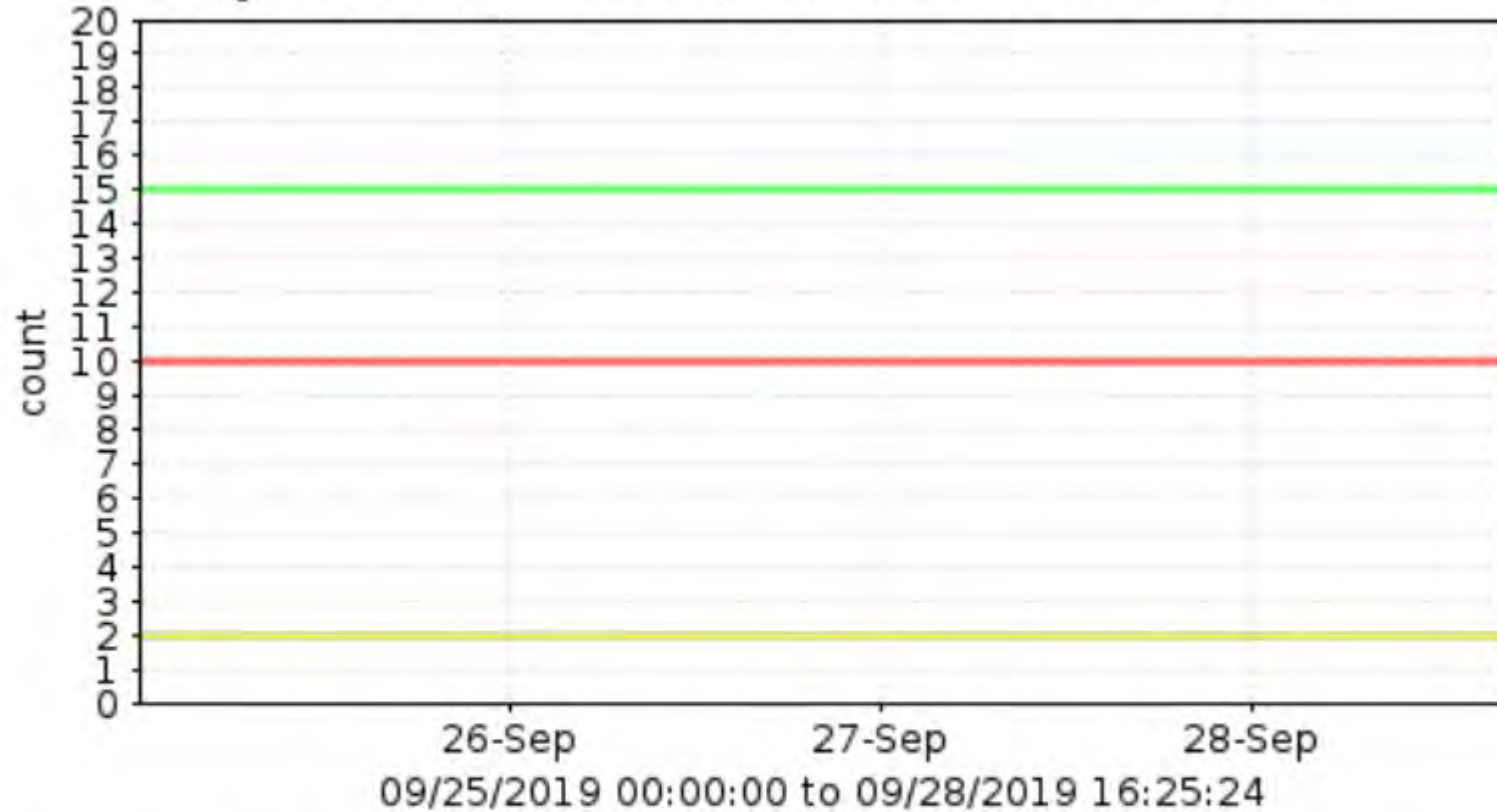
- 3001084 Angel Peak 5052 (HL) ALERT2 Receiver Count
- 3001087 Angel Peak 5052 (HL) ALERT2 Transmit Count (includes self report)
- 3001085 Angel Peak 5052 (HL) ALERT2 Repeater Count
- 3001082 Angel Peak 5052 (HL) ALERT1 Receiver Count
- 3001083 Angel Peak 5052 (HL) ALERT1 Repeater Count



HL50386 RADIO REPEATER DIAGNOSTICS

HL50386 Repeater
Total number of resets

Repeater HL 5052/50386 Reset Count



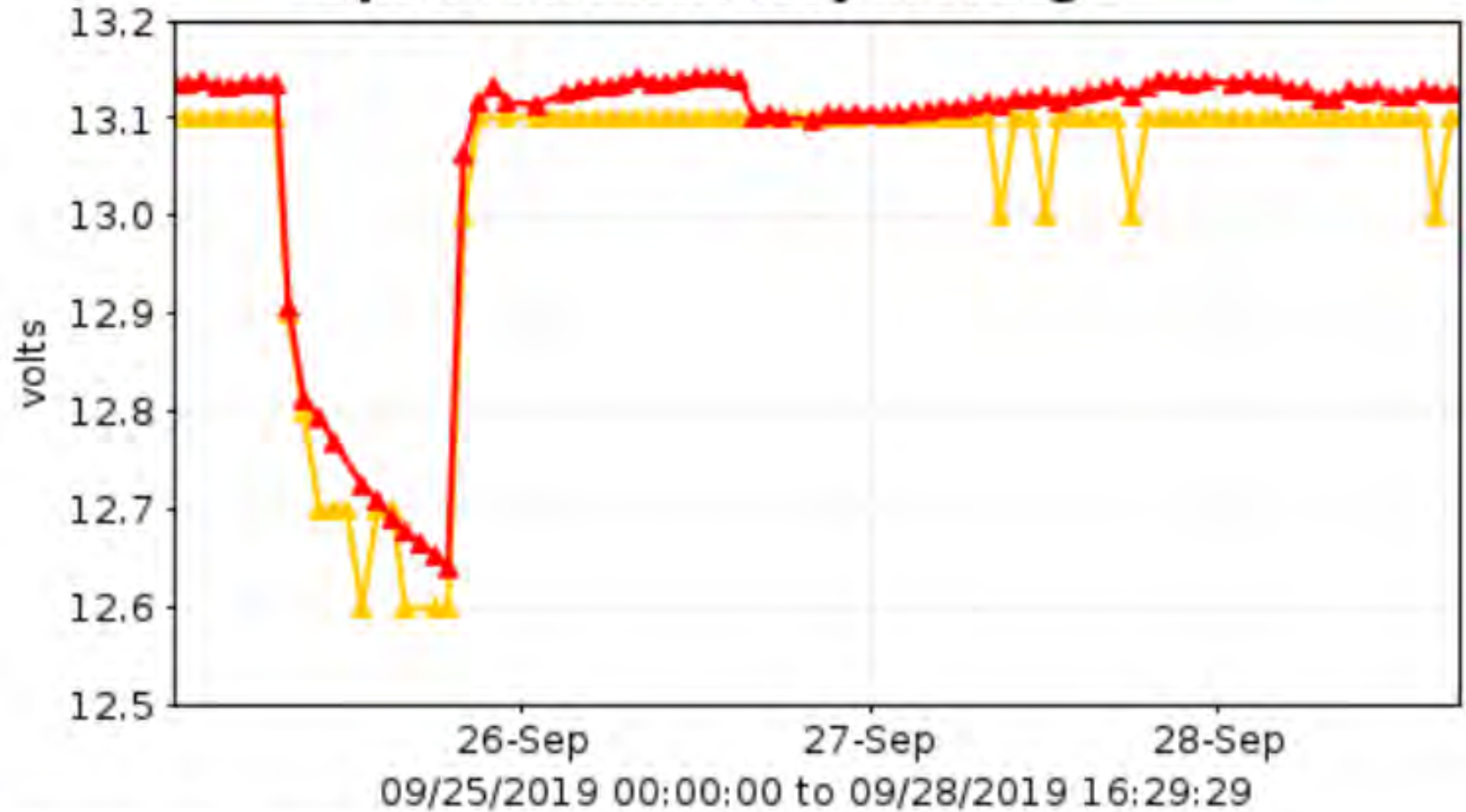
- 3001081 Angel Peak 5052 (HL) Reset Count
- 3001581 Boulder City Repeater (Red Mountain) Reset Count
- 3001181 Mt Potosi 5052 (HL) Reset Count
- 3001481 Spirit Mountain - 5052 (HL) Reset Count
- 3001281 Virgin Peak 5052 (HL) Reset Count
- 3001381 Wildcat Wash - 5052 (HL) Reset Count



A2X & HL50386 RADIO REPEATER DIAGNOSTICS

Comparison of battery
voltage between
HL50386 and A2X

Spirit Mt. Battery Voltage



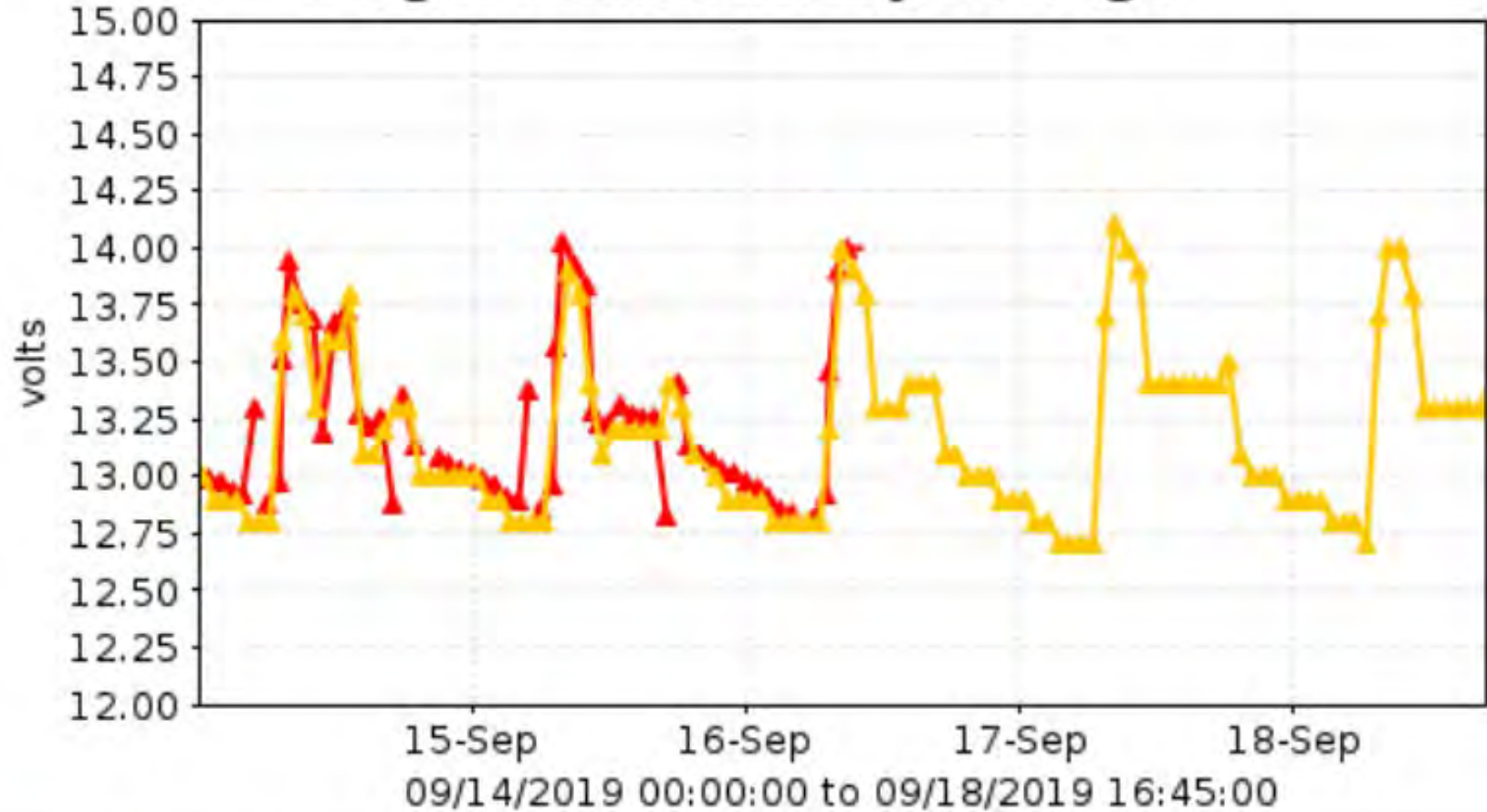
- 3001495 Spirit Mountain - A2X Battery Voltage
- 2322 Spirit Mountain BATT 50386 (HL)



A2X & HL50386 RADIO REPEATER DIAGNOSTICS

Helps to identify issues
with various
components at a
repeater

Virgin Peak Battery Voltage



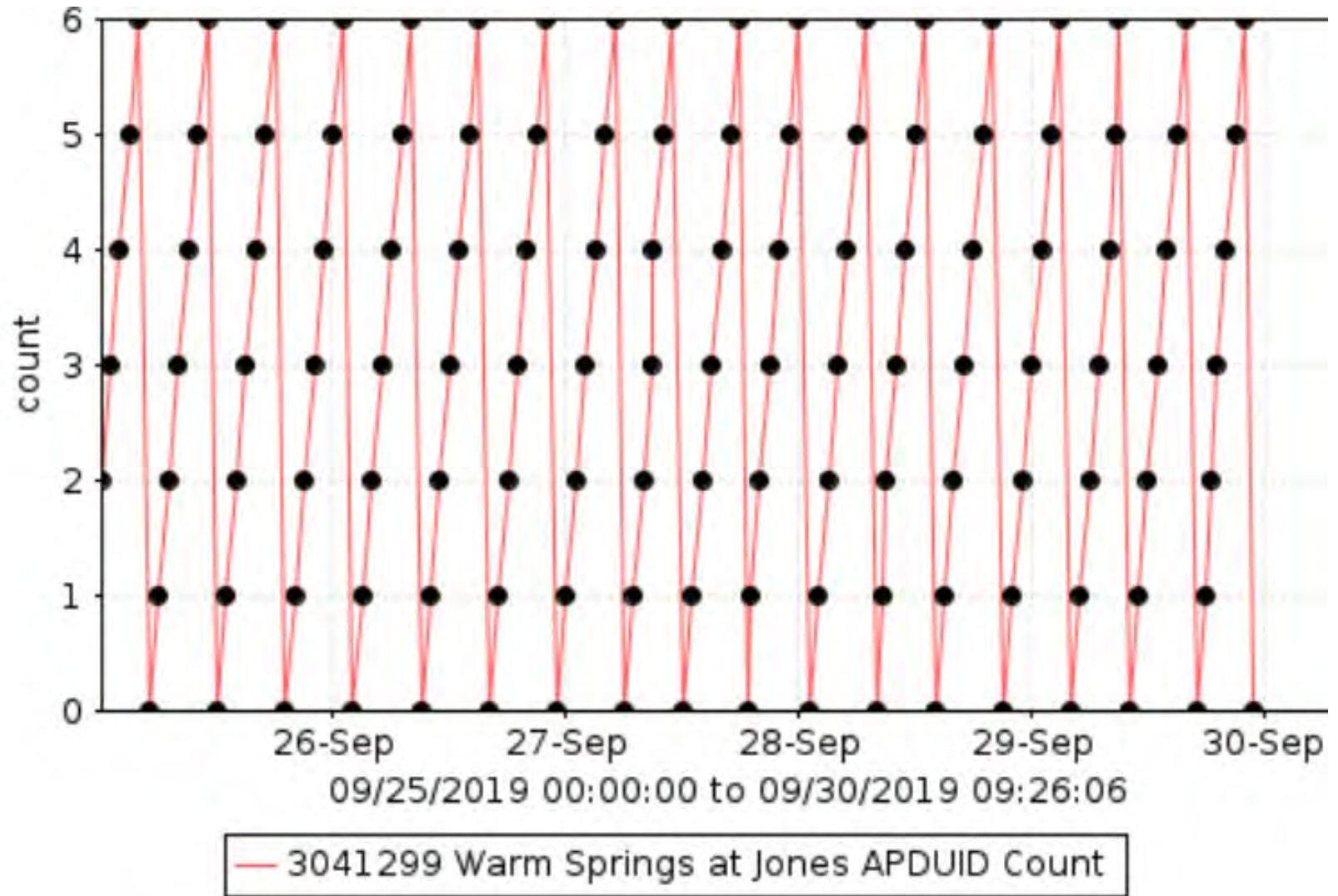
— 2266 Virgin Peak BATT 50386 (HL)

— 3001295 Virgin Peak Repeater - A2X Battery Voltage

Station Performance

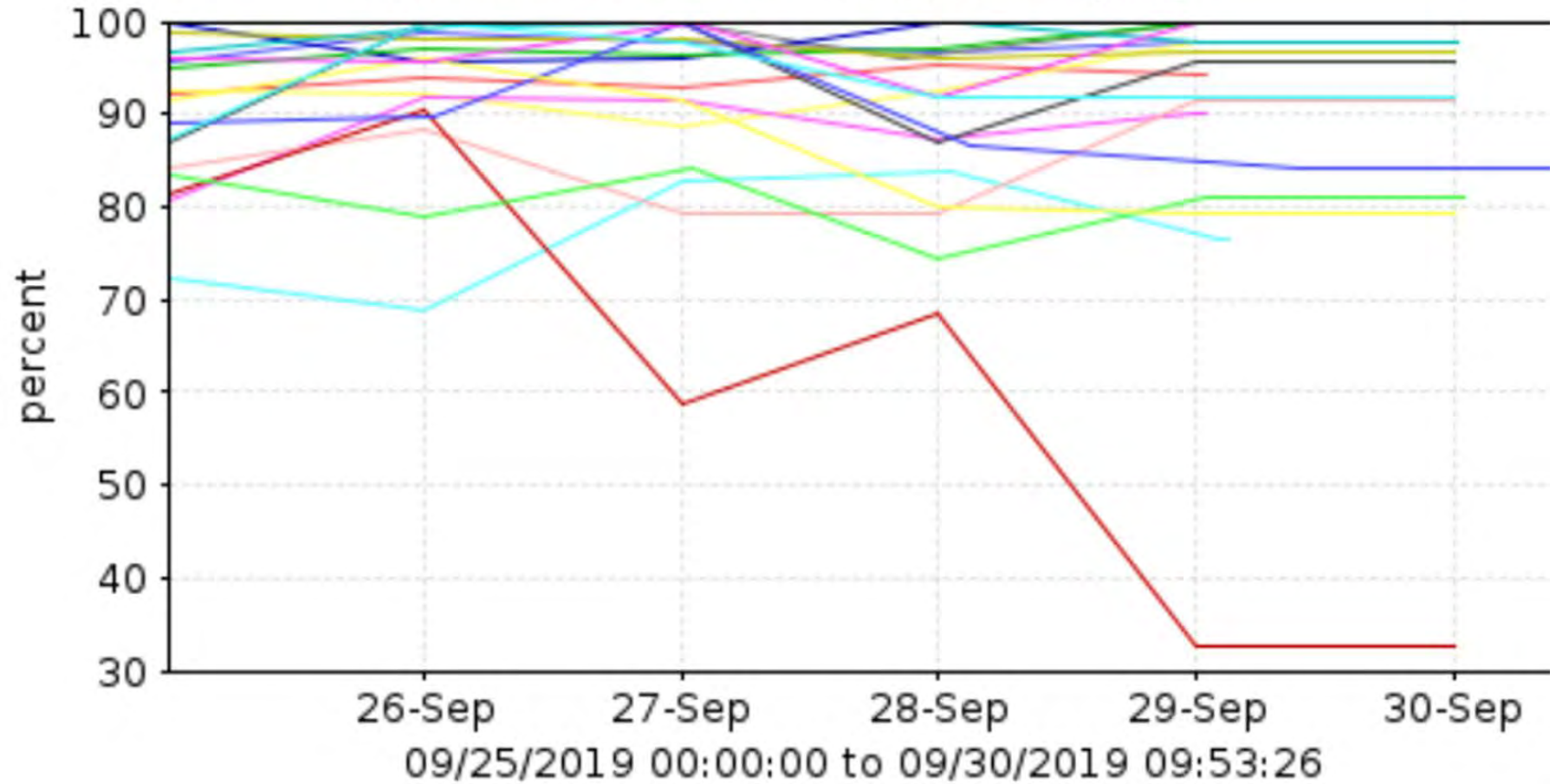
STATION PERFORMANCE

Increment count of A2 data packet (APDUID)



Station Performance

APDUID Performance (%)



STATION
PERFORMANCE

Average daily station
performance over time



Thank You

24Slides