

# Electric Utility Provider Leverages NETSCOUT's Solution to Assure Private 4G LTE Environment

nGeniusONE and nGenius Session Analysis Provides End-to-End Visibility Helping To Quickly Identify and Resolve Power Grid Issues

## OVERVIEW

### The Challenge

- Ability to Monitor Private 4G LTE Infrastructure
- Visibility into SCADA, 4G LTE Control Plane Signaling and VoLTE Functionality
- Quickly Uncover and Resolve Power Infrastructure Issues with Separate Power Infrastructure Functions

### The Solution

#### NETSCOUT's Service Assurance Platform

- nGeniusONE® Service Assurance Solution
- InfiniStreamNG® Software for COTS and Appliances
- nGenius® Session Analyzer (nSA)
- NETSCOUT® Professional Services

### The Results

- Enabled separation and monitoring of key power infrastructure devices with the use of APN (Access Point Name) technology
- Proactively identified issues and significantly reduced MTTR (Mean Time To Resolution)



### Customer Profile

This public utility company provides clean, safe, reliable, and affordable energy to millions of customers. Many public and private utility companies today use Supervisory Control And Data Acquisition (SCADA) technology to provide information on how the power grid is performing.

This company decided to add a secure private 4G LTE network to give wireless access to these SCADA IoT devices in the field, which can in times of crisis be used to avoid or quickly resolve power outages. In addition, this customer uses this 4G LTE wireless infrastructure for their employee maintenance crews which allows first responders and public schools to access their network.

### The Challenge

This public utility company needed monitoring visibility to their 4G LTE infrastructure and turned to NETSCOUT for their nGeniusONE and nGenius Session Analysis toolsets to help them monitor two data centers in major cities in North America, including their:

1. Transmission SCADA (T-SCADA)
2. Distributed SCADA (D-SCADA)
3. 4G LTE Control Plane Signaling, and
4. Voice over LTE (VoLTE)

This public utility customer needed a way to separate functions within the power infrastructure to monitor each individual process to be able to identify the problems and to quickly resolve them.

The 4G LTE 3GPP standards provide an elegant solution by which this public utility provider utilizes separate key power infrastructure elements by setting up unique APNs per group.

The NETSCOUT tools then provide APN KPIs (Key Performance Indicators) allowing the customer to quickly see which, if any, of these power infrastructure elements are having network issues.

In addition, the NETSCOUT tools provide this customer with alerts to inform their 4G LTE support teams when there are issues with the wireless infrastructure, VoLTE performance or the SCADA application.

### Solution in Action

This customer's 4G LTE support team set up two data centers, and these were equipped with NETSCOUT's Packet Flow Switches (PFS) and high-capacity InfiniStreamNG probes deployed via NETSCOUT's appliance model and Commercial Off The Shelf (COTS) model along with nGeniusONE servers and nGenius Session Analyzer.

Once packets reached the analysis tools, the three main resources which the company needed to troubleshoot and monitor included:

- The 4G LTE wireless network
- IoT devices separated by APN, and
- The performance of VoLTE transactions occurring due to the public utility crews, first responders, and public school systems.

This was accomplished using a combination of nSA and nGeniusONE. The unified view of these separate resources provided by nGeniusONE enabled fast determinations about which resource is involved in any one incident or performance bottleneck.

Their IT team also engaged NETSCOUT's Professional Services Group to ensure quick implementation and to reduce the time to value of the additional visibility. The Professional Services Group initially focused on building dashboards and workflows for monitoring the variety of complex protocols critical to their 4G LTE support team.

### The Results

The customer was extremely pleased that NETSCOUT was able to deliver the full range of their required parameters.

IoT sessions, which had failed (whether in the mobile backhaul network or in the IoT control application), could now quickly be identified. As well, information could now be provided about the timing and cause of the failure - lowering MTTR compared to previous performance.

With the combination of the nGeniusONE solution and nSA in place, this public utility company can now provide their users a continuously available, secure environment. Failed sessions can be spotted at session setup or during normal operation; and session teardown can be monitored. The public utility's 4G LTE support staff has complete packet coverage.

As well, the 4G LTE support team can now proactively identify issues and resolve these problems quickly to protect critical network service. Moving forward, the COTS model of

deployment can continue to be implemented allowing incremental growth of the monitoring solution in a straightforward and cost-effective process.

As this public utility continues to experience rapid growth, they are confident in their ability to maintain the availability and quality demanded by their customers - thanks to NETSCOUT

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### LEARN MORE

For more information about NETSCOUT Service Assurance solutions and the Session Analyzer products visit:

<https://www.netscout.com/product/ngeniusone-platform>

or

<https://www.netscout.com/product/ngenius-session-analyzer>

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