NETSCOUT®

Toll Road Authority Improves Fare Collection Application Performance With NETSCOUT

Enhances Visibility, Real-time Intelligence Needed for Improved Video and Application Processing

OVERVIEW

The Challenge

- New visibility and monitoring demands in automated toll collection and financial processing environment
- Accurate toll collection required for efficient roadway travel and financial processing

The Solution

- nGeniusONE® Service Assurance platform
- NETSCOUT® InfiniStreamNG® appliances
- nGenius® 5100 packet flow switch appliance supporting 40G network speeds

The Results

- Improved visibility into, and real-time monitoring of expanded video and application monitoring enhances automated toll collection, processing, and enforcement
- Better travel experience for residents and enhanced toll road authority perception

Customer Profile

This government-operated toll road authority (authority) oversees a roadway network that annually supports millions of residential, business, and visitors traveling throughout the region.

The authority has distinguished itself by executing a number of infrastructure projects on schedule across the region, as well as transitioning to a toll plaza network that relies on use of transponders and vehicle stickers to process automatic fare payments. This state-of-the-art system reduces the delays associated with manual collection of cash-based transactions at toll booths. By largely eliminating manual toll booth collections, the authority has improved the flow of traffic across regional roadways and improved the quality of the driving experience as a result.

For years, the authority's information technology (IT) team has relied on the nGeniusONE Service Assurance platform to provide visibility into, and troubleshooting of, the authority's application and database performance issues.

The Challenge

Automated toll collection depends on scanning vehicle transponders and windshield-mounted stickers, matching them to registered customers, and successfully processing payment billing and collection. This is a complex technology service, and disruptions can be challenging to pinpoint.

ENTERPRISE

The automated toll collection application suite was not a simple service to visualize or monitor, due to technological complexity, dispersed locations, and the millions of travelers driving regional roadways and their transactions traversing the network. The service had grown to incorporate:

- Web-based applications supporting customer transactions
- Credit and debit card authorization and financial processing for automated toll collection
- Physical toll road authority locations for transponder and vehicle sticker sales, as well as bill payment and dispute activities

The authority had also expanded use of a video photo system similar to those used by in many toll road networks to take snapshots of millions of license plates to ensure related transactions are processed using a SQL database server. The effort associated with this element of the video environment is significant, with IT visually inspecting the quality of license plate captures in real time, using wall-mounted monitors at their data center locations. If the video system experiences outages or performance issues, the authority is at risk for higher instances of toll evasion and associated lost revenues.

Similarly, over time, the network environment had been upgraded to incorporate a move to 40G network speeds as part of redesigned data centers attached to local government networks.

In keeping pace with these technology advancements, IT knew they needed to likewise expand visibility into this next-generation application and network environment, enabling them to advance beyond troubleshooting performance issues to include real-time monitoring of the technology baseline supporting automated toll collection services.

Solution in Action

The IT team is meeting these collective challenges by adding the following to their NETSCOUT solution:

- Expanded nGeniusONE Unified Communications performance analytics, with real-time service dashboard views dedicated to proactive video monitoring of automated toll collection
- Additional InfiniStreamNG (ISNG) technology in the data center environment Ideal for high-capacity monitoring, high-volume aggregation links, and vast storage for long-term forensic analysis
- PFS 5100 technology supporting traffic visibility into the new 40G data center network speeds for distribution to ISNGs and other monitoring tools

Using the expanded visibility into their application environment with enhanced network monitoring support, the authority is employing nGeniusONE Service Dashboard views for real-time unified communications monitoring of the voice and video environment. The IT team has gained the granular views needed to differentiate network and application performance issues. In addition, the IT team is employing nGeniusONE's contextual workflows to monitor transaction flows from the toll locations to the data center, which improves their ability to identify application slowdowns that may adversely impact collection accuracy.

The Results

When transaction delays inconvenience drivers, they quickly share negative feedback over multiple social media platforms – regardless of whether the issue has surfaced at a toll plaza, sales outlet, or involved an inaccurate monthly account statement. The ability to leverage NETSCOUT smart visibility to provide real-time, actionable intelligence into application performance is helping to keep the business running without adversely impacting motorists or generating associated negative media. This is having the positive effect of bolstering the authority's reputation within the region and IT's standing within the organization.

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https://www.netscout.com/solutions/service-assurance-transportation

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