NETSCOUT®

Global Technology Company Leverages NETSCOUT's Solution to Assure Client's IoT Experience

nGeniusONE Visibility Assures Performance of Growing Traffic From IoT-Enabled Devices

OVERVIEW

The Challenge

- Data centers need to support mobile users across the country with multiple 10's of GBs of traffic
- Growth of IoT adoption increases monitoring needs
- Continuous IoT availability and securing customer information are critical

The Solution

NETSCOUT's Service Assurance platform

- nGeniusONE® Service Assurance Solution
- InfiniStreamNG® software appliances
- nGenius® Session Analyzer (nSA)
- NETSCOUT® Professional Services

The Results

- Enabled quick triage and troubleshooting of IoT traffic from static and mobile devices
- Reduced business risk and protected revenue-generating services

Customer Profile

This publicly held technology company operates globally to supply its customers devices and solutions in virtually every area of network and cloud network infrastructure. With sales operations around the world, this company has been offering their customers core packet services for many years. The division of the company that is described here provides packet core connectivity for 2G, 3G, 4G and soon 5G networks. They offer their customers data services for mobile carrier user plane traffic, specifically IoT data. These services may be provided via company owned data centers, regional mobile carriers, or commercial data centers such as Equinix. With so many new IoT services on the rise, e.g. internal and perimeter home security systems, roadside assistance services, personal fitness and medical monitoring devices, seamless communications are critical.

The Challenge

This division of the company had initially deployed a NETSCOUT solution for troubleshooting data issues for the monitored IoT devices in the wireless network. This was already in place in three data centers in major cities across North America.

The next challenge was to provide the division with additional instrumentation for the customer expansion underway due to the rising adoption rates of IoT. New data centers were needed – located in mid-sized cities or using various commercial data centers to complete coverage for IoT traffic and to provide geographical load balancing. Mobile users of IoT present a special challenge and geographic load balancing must be implemented in a sophisticated way to ensure that mobile IoT sessions have their control plane and data plane traffic associated so that effective troubleshooting can take place.

DNS services, RADIUS and DIAMETER protocols, and address resolution capabilities are the functions which were most critically in need of improved monitoring and better Mean Time to Resolve (MTTR). Since this IoT transport service was being provided to clients who, in turn, had multiple customers using their end-to-end IoT services, billing information also needed to be tracked through the system.

At the same time, troubleshooting tools needed to extend all the way to the edge, allowing the identification of individual users.

Finally, both network security and network/application performance needed to be monitored closely to ensure continuous availability since the IT staff needed to be able to quickly determine whether a security threat or an infrastructure performance issue required attention.

Solution in Action

The IT team of this division added two new data centers, and these were equipped with high-capacity InfiniStreamNGs deployed via the Commercial Off the Shelf (COTS) model and additional instances of nGeniusONE servers, along with NETSCOUT's Session Analyzer (nSA).

Once packets reach the analysis tools, the two main resources which the tech company needs to monitor the availability of, and troubleshoot on, are: 1) The wireless network involved and 2) A cloud based IoT control application which acts as a central manager for IoT devices. This was accomplished using a combination of nSA and the new instances of nGeniusONE. The unified view of these separate resources provided by nGeniusONE enables fast determinations about which resource is involved in any one incident or performance bottleneck.

The IT team also engaged NETSCOUT Professional Services to ensure quick implementation and reduce the time to value of the additional visibility. A Professional Services Engineer initially focused on building dashboards and workflows for monitoring the variety of complex protocols in use and critical to the division's customers.

The Results

The customer was extremely pleased that the NETSCOUT team was able to deliver the full range of the required parameters as outlined in their requirements. IoT sessions which failed, whether in the mobile backhaul network or in the IoT control application, could be quickly identified and information provided about the timing and cause of the failure, lowering the MTTR compared to previous performance.

With the combination of the nGeniusONE solution and nSA in place, the technology company can provide their users a continuously available, secure environment which is essential for a high-quality IoT reporting channel. Failed sessions can be spotted at session setup or during normal operation, and session teardown can be monitored. The IT staff has complete packet coverage, and the ability to load balance between multiple geographies without separating user session traffic.

IT now can proactively identify issues, whether they are detected by the new solution or their in-house tools, and resolve these problems quickly to protect this revenue generating network service. Also, due to the COTS model of deployment, growing the monitoring solution with the IoT network can be done incrementally and in a straightforward and cost-effective process.

For this IT group, as their business continues to experience rapid growth, they are confident in their ability to keep pace and maintain the availability and quality needed, thanks to NETSCOUT.

LEARN MORE

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

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

or

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

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