



## Leading Tourism Company Uses NETSCOUT to Assure Critical Ship-to-Shore UC Services

### OVERVIEW

#### Region

Americas, Southeast

#### Business Challenge

Leading tourism organization required a scalable and high-performance solution to optimize the delivery of applications and services across a global network of branch offices, data centers, and cruise ships. The company needed end-to-end visibility into all services touching the customer lifecycle to ensure that passenger expectations are met and exceeded.

#### NETSCOUT Solution

- nGeniusONE™ Service Assurance Platform
- Adaptive Service Intelligence™ technology
- InfiniStream® appliance
- nGenius® Integrated Agent

#### Business Value

- Protects the customer experience.
- Optimizes the performance and availability of customer-facing, shore-side applications and basic revenue-generating onboard services.
- Quickly identifies service delivery performance issues, minimizes downtime, and proactively prevents future issues while utilizing fewer IT staff resources.
- Provides real-time reports with statistics and metrics to simplify IT operations, and enhance executive decision making.
- Simplifies the deployment process for new technology, applications and services.

### NETSCOUT nGeniusONE Service Assurance Platform Helps Tourist Services Company Optimize and Protect Customer Experience Across Worldwide Shore-based Operations While Growing Its Ship Fleet

#### Customer Profile

Headquartered in the southeast United States, this leading tourism services giant has been a travel industry leader since the 1960s. As one of the largest cruise line companies in the world, the company operates five brands. The company offers customers more than 420 destinations worldwide with its 40 ship fleet. To ensure a positive passenger experience, the company employs more than 5,200 shore-based employees worldwide and over 52,000 shipboard workers.

With over 40 years of leadership in the travel industry, the company understands that customer experience is paramount and is the foundation of their success. Meeting and exceeding passenger expectations during all phases of the cruise is crucial for customer satisfaction, loyalty, and repeat – and referral – business. As a result, the company puts great emphasis on how every part of the organization can add value to the service delivery value chain. From the front-line staff to the IT organization, everyone must do their part in enhancing the cruise experience. As a result, the company's Information Technology (IT) group views service delivery and user experience, both internally and customer-facing, as a top priority to delivering great vacations through technology.

Currently, the company is in the process of incorporating cloud services and adopting social media, mobility, video and Unified Communications (UC) throughout the organization. As such, the company is committed to implementing new technology shipside and shore-side that improves the passenger experience and employee productivity. This, it is hoped, will improve the company's bottom line. IT innovation can be seen shipboard, for instance, with bow-to-stern

wireless networks, interactive digital signage, and real-time restaurant availability tracking on recently launched ships. Shore-side services as well are equally important as network applications are used to help guests plan cruise activities in advance of their trip. Employees, too, rely on the latest technologies to perform daily business operations. From revenue-generating applications to basic services like the IP phones and IPTVs in every stateroom, the company's IT group wanted a solution that could assist in diagnosing problems with customer-facing applications and services faster than using basic native commands on router systems or servers. With all new services, applications and methods of communications, the tourism company has to utilize the most efficient and cost-effective means to manage and monitor these new innovations.

### Business Challenge

The company's infrastructure includes a complex network of offices, call centers and data centers that span five continents, as well as 40 cruise ships constantly on the move. With this globally distributed network, the company faces IT service delivery challenges that are unique within its industry. In addition to managing shore-side operations, the company has to ensure that 40 cruise ships, with each having its own campus of thousands of users, is able to communicate with headquarters as well as being capable of operating independently. It is absolutely crucial to business operations that the company's network, whether satellite or terrestrial, be able to deliver business-critical applications and services at any given time, 24 hours a day, seven days a week.

### Reduce Costs with IP-based Unified Communications

An important organizational initiative is using technology to drive down internal and external communications costs. In order to reduce its telephony costs for both incoming calls from customers as well as internal communications, the company has moved to IP-based UC. Call centers rely on Voice over IP (VoIP) to field customer inquiries and bookings. Moreover, all internal communications have moved to VoIP and video conferencing to enable real-time collaboration among teams. The company's IT group needed a solution to make sure Quality of Service (QoS) was applied in all the right places. If a user calls about a voice quality problem, it is important for the IT team to have the capabilities available to see where the problems are occurring and what is causing the issue. This enables timely resolution and helps prevent similar issues from re-occurring.

With a worldwide IT team of 600 people structured in organizations such as server, application, network and communications, and shore-side or shipside, it was a priority for the tourism company to improve group collaboration and to expand information sharing among the teams. With collaboration across the IT organizations, the team has increased productivity and efficiency by providing concise information where attention is needed. If issues arise, the team needed to resolve the problem would begin the necessary analysis and problem solving. The end result is simplified operations and decreased resolution times. Moreover, the information sharing and notification to executive management would better communicate the difference that IT was making to company success and customer satisfaction. By utilizing an IT solution that provides relevant reports and information, executive management would be able to make more informed decisions on where to direct IT resources.

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*“From the call center reservation system to onboard point-of-sale, any downtime of our IP-based applications can have direct revenue impact,” said the manager of enterprise communications & network solutions for the company.*

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Moreover, the IT manager also believes, “As more and more network services utilize IP-based technology, it is absolutely crucial to have a solution that gives us granular visibility into the performance of the network and help us ensure the availability of both new and existing services while simplifying management and rollout.”

### NETSCOUT Solution

NETSCOUT plays a central and strategic role in achieving this tourism company's service delivery and service-assurance goals. NETSCOUT's nGeniusONE platform and Adaptive Service Intelligence (ASI) technology help the company achieve significantly enhanced application and network availability from ship to shore by providing visibility into the network and enabling the IT staff to better manage bandwidth utilization and network optimization. In addition to uptime, NETSCOUT improves the predictability of applications and services by enabling the organization's IT team to monitor resources in real-time with meaningful information to proactively prevent issues from affecting service levels. Alongside real-time statistics, the NETSCOUT solution provides historical, directly-captured network packet information that can be used for forensics and troubleshooting with more complex or intermittent issues. Additionally, with the NETSCOUT solution, the organization's IT

organization can better validate new services and policies before rolling them out across the network, thus helping to avoid service disruptions or unexpected issues that would adversely affect service delivery to customers.

Recently, the company experienced a critical issue with substandard voice quality at one of its call centers. In order to identify the root cause of the issue, the IT team used NETSCOUT's nGeniusONE platform and ASI technology running on InfiniStream appliances to identify whether it was a utilization or an application issue and if it was at the desktop, the WAN or the data center. In this particular case, the NETSCOUT solution identified the private branch exchange (PBX) as the faulty component. It was determined to be a Quality of Service (QoS) issue where some of the PBX interfaces had been moved or added. What made it more challenging was that the interfaces were not being tagged properly across multiple sites forcing the IT team to look at packet traces at the main data center in Miramar, Florida, and branch offices in Kansas and Oregon – while tying them all together. Since the issue was intermittent, the team looked at all of the traffic per interface on the PBX with the NETSCOUT solution and discovered two of the interfaces were not marking traffic properly.

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*“We kept turning back to the NETSCOUT solution for the most critical and relevant information and metrics and, as a result, we were able to get to the root cause and resolve the QoS issue altogether,” said the manager of enterprise communications & network solutions.*

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Moreover, he says, “As a result, we were able to point out to management that the NETSCOUT solution enabled us to solve this guest-experience problem. This gave us the flexibility to continue deploying NETSCOUT across multiple sites and locations.”

With management support, IT is continuing to implement NETSCOUT strategically throughout the network. To extend visibility and traffic granularity, the organization also leverages the nGenius Integrated Agent for Cisco ISR as part of its standard deployment process for new offices, upgrading branch locations and refreshing cruise ships. Recently, while in dry dock, one of its ships went through a thorough refresh of guest-facing facilities, including IPTV and VoIP telephones in its staterooms and public facilities as well as installing a ship-wide wireless internet system. In order to ensure these IP-based systems were properly monitored, the IT staff relies on the nGenius Integrated Agent to provide deep-packet metrics for support staff on the ship and shore side.

“The nGeniusONE platform and ASI technology allows us to stay ahead of and diagnose issues prior to them becoming a problem that might affect the customer experience,” intones the IT manager.

Moreover, he also says, “More specifically, when we were rolling out a certain class of ships, they were outfitted with our first comprehensive IP-based Voice-over-IP, IPTV, IP-centric environments. NETSCOUT provided a solution that could help both ship-board and shore-based IT staff diagnose and protect mission-critical services and applications utilized by the passengers or staff.”

In addition to the cruise ships, the nGenius Integrated Agent is relied on to monitor shore-side branch offices and applications. With administrative branch offices and call centers spread across the globe, it is crucial for the organization that VoIP and video conferencing operate at peak performance for intra-company collaboration and communication with customers. The nGenius Integrated Agents located in the branch offices and call centers are actively utilized to make sure QoS is applied properly and, if there is an issue, to determine if it stems from the company's service provider or internally. Moreover, the deep-packet inspection, forensic, and reporting capabilities can be accessed remotely, providing significant cost savings to the company. Other benefits include reduced travel costs as well as a reduction in various IT issues as they're resolved quickly with less impact.

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*“The nGenius Integrated Agent is a win-win for us since it installs easily into the Cisco ISR – a solution that we already use. It provides us with a very cost-effective solution by allowing us to utilize our existing routers in some cases or installing in a router we were already planning to purchase,” says the manager.*

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The manager also says, “The nGenius Integrated Agent and the Cisco ISR are a powerful combination for recording WAN and LAN traffic, monitoring applications and services, and providing valuable utilization statistics to make sure that guest-facing and employee applications and services are at their best, whether shipside or shore-side.”

The company also takes advantage of the extensive reporting capabilities of the NETSCOUT solution to review trending and utilization across the entire network, which helps the company to make better decisions on when and where to invest IT resources. In addition, the organization's IT department creates regular custom reports to advise teams of the health of services and the network as well as to provide high-level reports for executives on the overall health of IT services and the impact on the customer experience.

*"The organization likes to work with best-in-class products across the board. We stay involved with and engage vendors that are on top of their game. This includes NETSCOUT, which is a leader in the Service Assurance Space," stated the manager of enterprise communications & network solutions.*

### Business Value

Alongside IT benefits, the NETSCOUT solution provides overall business value to the organization by enabling the IT department to better manage applications and the network and to assure uptime of internal and passenger-facing services. From an IT staffing perspective, this frees up personnel to proactively manage the network instead of spending excessive time troubleshooting issues. With a distributed organization, the ability to use NETSCOUT to diagnose and rectify issues remotely with historically recorded packet data and metrics saves IT staff from the time and monetary costs associated with traveling to branch offices and sites to fix problems. With NETSCOUT helping assure the continuity of services, both the company's employees and customers are able to rely on network applications and services with a high level of user satisfaction.

Additionally, with the extensive reporting capabilities inherent within the NETSCOUT solution, the company's IT group can use the detailed usage and trending information provided by the NETSCOUT solution to better understand where current network and IT infrastructure is being under or over utilized and where resources need to be reconfigured or added to prevent potential network and service outages. Furthermore, the company is able to better maximize its existing IT investment since the nGeniusONE

platform and ASI technology provide valuable information to allow the company to maximize the ROI and TCO of current investments and better allocate existing and future IT budgets. The reporting capabilities are also utilized to provide high-level reports to the company's executives for better transparency into the network and the health of IT operations.

As a leader in the travel industry, the company is not content to rest on its laurels. It continues to invest in IT innovation and enhancements to improve the customer experience, improve IT operations, as well as bolster the overall company bottom line. NETSCOUT is an integral part of the organization's IT department as the IT department continues to retrofit its legacy ships as well as implement initiatives to expand bandwidth; extending granular network and service visibility to the company's worldwide branch offices, call centers, and data centers is vital to ongoing operations as well.

"The most important barometer of success at the company is customer experience. When passengers disembark from one of our cruises, we want them to leave with their expectations being surpassed. From customers contacting our call centers, to using their laptop by the pool, the modern cruise experience is about service assurance," says the IT manager.

<b>NETSCOUT Equipment Deployed</b>	nGeniusONE Service Assurance platform, InfiniStream appliance, nGenius Integrated Agent, nGenius Collector
<b>Cisco Equipment Deployed</b>	Cisco Catalyst switches, Cisco Unified Communications Manager, Cisco Unified IP Phones, Cisco Unified Wireless Network
<b>Network Scope</b>	184,000 Ethernet ports on 12,000 switches, 800 routers, 6,000 wireless access devices, 60 network optimization devices, 40 PBX systems, Unified Communications, satellite communications, 14,767 managed desktops/laptops, 3,400 servers, 69 data centers (ship side and shore-side)
<b>Users</b>	6,000 shore-side employees, 52,000 shipside employees, 92,300 passenger berths

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NETSCOUT offers sales, support, and services in over 32 countries.

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