NETSCOUT®

Service Assurance for Cruise Lines

Cruise line vacations are on the rise worldwide, with the State of the Cruise Industry Outlook study reporting 2019 travelers are expected to reach 30 million, representing a 6% increase over the 2018 figures of 28.2 million people. With hundreds of ships around the world, supported by more than 1 million jobs, cruise lines are big business, with high expectations from passengers and guests.

Technology and, specifically, digital transformations have been instrumental in making the cruising experience more attractive to more travelers. Consider the passenger journey, if you will, from investigating cruise options through to travel itself:

• Using cruise line websites for investigating destinations, excursions, costs, and amenities.
• Calling contact centers for personal assistance with questions, bookings, arrangements, rewards programs, and changes.
• Accessing mobile apps for booking onboard meal and activity reservations, excursions at destination sites, room access via smartphone, and charging / tracking in-cruise purchases.

• Logging on to ship-board networks that enable passengers to stay connected with family, friends, and work while "away from it all!" In an era of sharing everything, access for rapid uploads to Instagram, Facebook, Twitter and What's App are essential – and when positive comments are posted and shared, make for good advertising for cruise lines.

And these are only a few of the services the passengers see. There are extensive back-end innovations for supporting all the necessary services to provide an exceptional vacation experience for their guests – from crew scheduling; passenger billing systems; food, beverage, and merchandise ordering; ship operations and navigation systems; ship-to-shore to data center communications; just to name a few of the many areas of concern.

It is important to note, that for the crew on board each excursion, the ship is their office AND their home! Everything from email to purchase orders to credit card authorization to schedules and payroll are all on-line. When on-board, they are, in reality, away from home on business. However, life continues for family and friends on shore. Phone calls, emails, social media access all make the time away more tolerable and manageable for the crew.

A passenger's experience is going to be impacted by the performance of all these wide-ranging services. Depending on the extent of the disruption, the impact may be a simple shrug of the shoulders or as disappointing as regretting the cruise entirely. Considering how quickly poor experiences are shared publicly and over social media, cruise lines work overtime to avoid those headline-grabbing, poor travel experiences.

According to a study from Cruise Lines International Association, cruise passengers leverage onboard connectivity for Instagram feeds to share their diverse travel experiences, both onboard and during excursions from several cruise destinations. And it is shares of cruise experiences like this that are contributing to the more than 350 million posts with the tag #travel each day.

Our Approach

NETSCOUT's approach to application and service assurance for the cruise line industry is built on a foundation of high-quality data and real-time analytics. Based on packet data, NETSCOUT's patented Adaptive Service Intelligence™ (ASI) technology provides the most robust data source available to ensure that critical cruise line services are delivered from ship-to-shore to data centers, cloud service providers, and contact centers by measuring the actual transactions and the dependencies of the service.

NETSCOUT® analytics are the industry-leading standard for scalability and ease-of-use, enabling proactive troubleshooting and analysis. Leveraging ASI, the nGeniusONE® Service Assurance platform delivers unmatched capabilities that ensure the reliable and uninterrupted delivery of critical applications including Web services, Citrix, Oracle, and SAP that might be used for customers searching cruise availability and bookings; SIP and other voice protocols used in their contact centers; mobile applications and/or SaaS applications for booking reservations and charging purchases; and critical service enablers, such as DNS or DHCP. Even custom applications a cruise line may have for rewards programs can be identified and monitored. High quality performance of e-mail, purchase approvals, credit card authorizations, scheduling apps, and voice calls are equally important for efficient crew operations.

NETSCOUT's flexible deployment alternatives are providing visibility across the entire path of a cruise line's networking environment – from ship, to shore, to cloud! Operations on ship-board are monitored and analyzed for quality delivery of services. Whether a passenger is working remotely, requesting a crew member to check inventory for a purchase at one of the stores stored in a virtual server in the data center, or using a guest services mobile application hosted in the public cloud, they will enjoy a seamless experience with monitoring and analysis with service assurance solutions from NETSCOUT. Should an issue emerge in the performance of these services, troubleshooting capabilities leveraging the logical, intuitive workflows in nGeniusONE have the effect of reducing Mean Time-To-Resolution (MTTR) to quickly pinpoint the source of the problem and restore service to optimal performance.

Rapid triage and faster MTTR for issues impacting the quality of experience a passenger receives – before, during and after the cruise with web sites, call centers, mobile apps, and onboard technology and communications.

Our Solution

NETSCOUT delivers solutions that support both the wired and wireless infrastructures in cruise lines. The nGeniusONE platform provides real-time visibility into both IP-based business and passenger services along with contextual workflows to speed problem resolution, making it easy for Level 1 responders to use while still being powerful for experts to operate. nGeniusONE leverages rich packet data for extracting performance metrics. With scalability to support up to 100Gbps speeds, the nGeniusONE platform is designed for use in both physical and virtual, public and private environments in the world's largest and most-demanding enterprise and cruise line networks.

Rather than look at individual elements in isolation, nGeniusONE provides an overarching view into the performance characteristics of the components associated with service delivery both on premise and in the cloud. This exposes underlying service dependencies between such services as software as a service and E-commerce applications, POS payment processing applications, mobile apps, and

Satellite Communication
From Ship to Shore

SHIP-BASED COMMUNICATIONS

PASSENGERS
Mobile phones/apps

CREW
Business Operations and Personal

SHORE-BASED COMMUNICATIONS
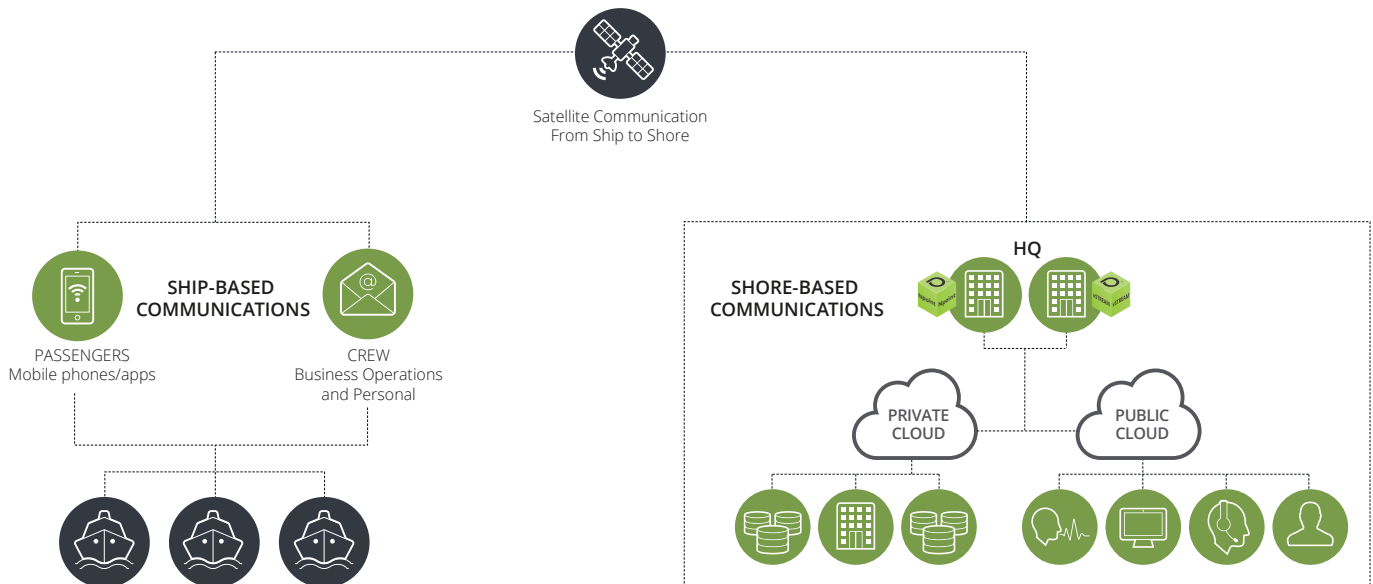
HQ

PRIVATE CLOUD

PUBLIC CLOUD

Figure 1: NETSCOUT assures end-to-end service delivery across even the most complex application environments, from ship, to shore, to cloud to ensure that cruise lines can stay up and running 24 by 7. This includes communications with their web sites and call centers for everything from research and reservations to changes and charges, via phone, laptop, mobile app regardless of whether the service is hosted in the private or public cloud.

the individual applications servers, their backend databases, and all the necessary service enablers such as DNS, DHCP, and authentication like LDAP and Active Directory. This helps IT operations to more effectively manage delivery of services to ships, in dock or at sea, or ensure uptime of critical applications at data and contact centers, improving the teams' ability to proactively identify the root cause of problems.

For onboard ship service performance and availability of SaaS applications and others, over ethernet or wireless environments, NETSCOUT offers the nGenius®PULSE solution for infrastructure analysis and synthetic testing to monitor services even when users are not accessing the applications. This helps to identify issues that may impede quality performance on ships over local wifi, as well as to test and trend performance from ship to shore as different satellites are leverage throughout a long-term voyage.

The nGeniusONE platform supports thousands of voice, video and data applications including Web-based apps, voice and video, SIP, and even custom applications.

Our Value to Cruise Lines

For cruise lines, NETSCOUT solutions are designed to provide insights into critical applications and services the business depends on. With NETSCOUT, the cruise line's IT organizations can:

- Assure quality of experience on Web-based services and the performance of website and passenger portals by monitoring the Web applications and generating alerts to detect when responsiveness is slow or errors occur.
- Make informed business decisions, such as migration to the cloud and performance of SaaS services and partners, based on key analytics derived from packet traffic monitoring.
- Ensure a smooth travel experience for passengers with end-to-end visibility from ship, to shore, to data center, in private and public cloud environments.
- Protect call quality in contact centers as well as between crew and headquarters operations, with customizable dashboards and reports showing QoS, MOS scoring, jitter, packet loss, and other key metrics.
- Get ahead of issues and reduce MTTR by proactively responding to service degradations impacting critical services, such as mobile applications, point-of-sale terminals and credit card authorization services.
- Improve IT team collaboration with a single unified view into voice, network, and application services with end-to-end visibility into session-level details, regardless of where in the hybrid cloud the app is hosted.

NETSCOUT

Corporate Headquarters
NETSCOUT Systems, Inc.
Westford, MA 01886-4105
Phone: +1 978-614-4000
www.netscout.com

Sales Information
Toll Free US: 800-309-4804
(International numbers below)

Product Support
Toll Free US: 888-357-7667
(International numbers below)

NETSCOUT offers sales, support, and services in over 32 countries. Global addresses, and international numbers are listed on the NETSCOUT website at: www.netscout.com/company/contact-us