

Carnival Navigates Sea of Data With Splunk



Executive summary

Carnival Corporation — the world's largest leisure travel company — operates nine cruise brands, sailing 100-plus ships to more than 700 ports on all seven continents, representing about 50 percent of the global cruise market. Carnival continually strives to improve and personalize the customer experience, and one solution is to unlock the value from its data — from the bridge and engine room to the shops, restaurants, casinos, website and more. Since deploying the Splunk platform, Carnival has seen benefits including:

- Enabling secure transactions across land and sea
- Providing seamless internet connectivity and onboard app usage
- Ensuring the booking process meets customer expectations and generates revenue

Why Splunk

With about 12 million people cruising with Carnival annually and 250,000 guests on the water at any time, Carnival Corporation is a collection of floating cities that generate a lot of data. Previously, information from shipboard systems, as well as data from the website and other sources, was siloed. Carnival knew that using its data more effectively — everything from monitoring the performance of onboard satellite dishes to enabling secure connectivity while at sea — could help to improve the customer experience.

Gary Eppinger, chief information security officer and global privacy officer, Carnival Corporation, is responsible for monitoring and protecting data across the environment, including onshore and across all of the ships globally. “Our biggest security challenge from a Carnival and an industry perspective is the shipboard applications and systems,” Eppinger says, adding, “My role is all about security — and that includes protecting customers’ information every day.”

After using the Splunk platform at a prior company, Eppinger brought it to Carnival. Since then, he and his colleagues have discovered many ways to leverage Splunk Enterprise, Splunk Cloud, Splunk Enterprise Security (ES) and Splunk IT Service Intelligence (ITSI) to get real-time visibility across all applications, services and security infrastructure to mitigate threats.

Industry

- Travel and Transportation

Splunk Use Cases

- Security Monitoring
- IT Operations
- Application Monitoring
- Infrastructure Monitoring

Challenges

- Needed visibility across all systems to improve and personalize the guest experience
- Secure shipboard systems and protect customer data

Business Impact

- Real-time visibility across all applications, services and security infrastructure to mitigate threats
- Enable seamless internet and onboard app connectivity
- Ensure the revenue-generating booking process runs smoothly
- Leverage connected device data to improve the customer experience

Data Sources

- Personally identifiable information (PII)
- Applications
- Satellites
- Shipboard systems
- Connected devices

Splunk Products

- Splunk Enterprise
- Splunk Enterprise Security
- Splunk Cloud
- Splunk IT Service Intelligence
- Splunk Machine Learning Toolkit

“One of the problems we’ve had in the past was making sure that we could have visibility across the different brands,” Eppinger says. “Splunk has given us an opportunity to consolidate that view across our ships and 10 corporate offices around the world. We now have the ability to bring that data together, and interrogate it in ways that we’ve never been able to do before.”

Ensuring complex systems operations

The number of complex systems and components on ships is astounding, from the navigation systems to HVAC and water purification systems, all of which generate hundreds of data sets that the Splunk platform ingests for monitoring and analysis. Behind the scenes, Splunk ITSI helps to ensure a smooth customer booking process on Carnival.com, where Carnival generates the majority of its revenue. “Carnival uses Splunk IT Service Intelligence to monitor the website,” Eppinger says. “Our IT team has complete visibility into the entire application stack so we can proactively manage the environment.”

Seamless connectivity

In today’s world, connectivity is critical to the guest experience, but cruise connectivity has been a challenge historically. “At Carnival, we’re leveraging Splunk and other tools and systems that we built to be proactive in solving connectivity issues and make sure there’s a seamless experience on board,” says Sean Kenny, SVP and CIO, Carnival Cruise Line.

Carnival uses Splunk Cloud and Splunk ES to deliver secure mobile access to guests throughout their vacation. While onboard, Carnival takes the guest experience mobile with the Carnival Hub app, which helps guests plan their activities, from booking spa appointments and excursions to exploring the wide variety of onboard entertainment and staying in touch with family and friends on board via text message.

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Arnold Donald, CEO
Carnival Corporation

Driving more value for customers

Eppinger explains that one of the newer technologies Carnival has launched is Ocean Medallion, a wearable device that offers customers interactive guest experiences, the convenience of opening their rooms with ease, and more. The Ocean Medallion also enables Carnival to monitor the traffic and activity on the ship. “We take that data and use it to better understand what customers need and like,” Eppinger says. “We’re learning every day how data can be an even bigger opportunity for us to drive value for our customers.”

Carnival continues to find new opportunities to innovate with its data and elevate the guest experience. “Our goal is to keep our guests’ experience across our nine brands second to none,” says Arnold Donald, CEO, Carnival Corporation. “That’s where we are and where we’re headed, and I can’t think of a better partner to help us get there than Splunk.”

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Gary Eppinger, Chief Information Security Officer and Global Privacy Officer
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