



case study

OVERVIEW

The USS Midway Museum is the most visited historic naval ship in the world, attracting over 1.2 million visitors a year. Dry docked in San Diego harbor, the USS Midway is three football fields long, 20 stories tall and weighs more than 64,000 tons.

REQUIREMENTS

- Pervasive high-speed indoor/outdoor Wi-Fi for public access and museum applications
- Support for thousands of concurrent clients
- Integrated AP support for BLE
- Rich user analytics and demographics
- Wired switching options on APs
- Simplified social media login for guests

SOLUTION

- Indoor ZoneFlex H500 802.11ac Wi-Fi wall switches
- Indoor ZoneFlex R500 / R600 802.11ac APs for flight simulation systems
- Outdoor Ruckus T300.391 sectorized 802.11ac APs
- Redundant ZoneDirector controllers

RESULTS

- 3X increase in Wi-Fi signal strength and coverage, 4X improvement in performance
- Support for hundreds of clients per AP
- BLE support to support way finding and museum location applications
- Simple social media login options for visitors
- Rich users analytics through Purple Wi-Fi

Smart Services over Smarter Wi-Fi

SOCIAL MEDIA LOGIN AND BLE LOCATION SERVICES BRING NEW VALUE TO Wi-Fi

The most visited historic naval ship in the world, sitting 220 feet high with a four-acre flight deck all surrounded by 64,000 tons of steel, the USS Midway Museum was Wi-Fi's worst nightmare. Signals would suddenly drop off, performance was erratic and some areas just couldn't be supported.

"I can't think of a worse environment for wireless," said Joe Gursky, IT Director at the USS Midway Museum. "We were in a real bind because we needed an industrial-strength Wi-Fi system that would also help us engage visitors and enhance their experience on the USS Midway. We just couldn't maintain reliable signals and performance throughout the ship with our legacy Cisco infrastructure. It was a complete mess."

The USS Midway Museum also wanted to use Bluetooth Low Energy (BLE) beacons to let visitors know where they were within the museum as well as push relevant location-aware content. Meanwhile, simplifying the user login experience and being able to gather detailed user demographics that could help the IT and Marketing staff enhance the visitor experience was high on the must have list.

"Finding a Wi-Fi system that could do all this seemed an impossible task," said Gursky.



ABOVE: The USS Midway Museum is the world's most visited naval ship, attracting over 1.2 million visitors a year.

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Full spectrum Wireless Distributor

The USS Midway Museum, like any other business, wanted to leverage Wi-Fi to improve the interaction and engagement with visitors by providing value-add location and social login services that would make their experience even better. But doing this on such a massive vessel with a three and a half inch armored, four-acre flight deck, made offering a reliable, fast and pervasive Wi-Fi service almost improbable. "Getting Wi-Fi signals where we wanted was a huge challenge for us," said Gursky.

In addition, The USS Midway wanted to use the Wi-Fi network to allow visitors to pull up exhibit information depending on where they were within the ship and have the ability to easily login to the network using familiar social media sites. This would allow the USS Midway to gather important demographic information, previously not available, about visitors, where they were and what they were doing.

So Gursky and his team turned to Equinox Telecom and Ruckus Wireless for help. The USS Midway Museum needed to support a fast growing base of users armed with Wi-Fi-enabled smart devices and who wanted to use their devices when touring the ship.

"Our primary goal is always to improve the guest experience here," said Gursky. "When we first installed the Ruckus H500 Wi-Fi wall switches, we were frankly astounded at the signal propagation and the ability for the APs to keep and hold strong signals for a such a large number of concurrent clients."

After evaluating solutions from Aerohive, Cisco and Ruckus, the USS Midway Museum standardized on Ruckus due to performance, coverage and flexible deployment options that allowed them to easily layer new services over the network.



ABOVE: Ruckus ZoneFlex T301s provide sectorized antenna systems to extend and strengthen signals across the 4-acre outdoor decks on the USS Midway.

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“Ruckus APs are doing things that we never thought possible. On top of that we now have user demographics and location capabilities that help us tailor the guest experience.”

Joe Gursky
IT Director
USS Midway Museum

Indoors, the USS Midway installed Ruckus H500 Wi-Fi wall switches throughout the corridors of the ship. The H500s not only provided them with faster Wi-Fi speeds and better coverage where it previously wasn't available, but also integrated BLE support and additional wired connections. BLE beacons can be easily attached via USB ports on every H500 to support way finding and location-based content delivery. Ruckus R500 and R600 802.11ac APs were used to support its flight simulation application where visitors can land aircraft on the battleship through a virtualized environment.

Above deck, the USS Midway Museum installed Ruckus T300 and T301 802.11ac access points to provide high-speed Wi-Fi service to guests, vendors as well as to adjacent parking lots.

To simplify guest access while gaining additional user demographics and behavior, the USS Midway Museum is making use of Purple Wi-Fi. Purple Wi-Fi provides an intuitive portal allowing visitors to login to the network using their credentials from popular social media sites such as Twitter, Facebook or Instagram. IT and Marketing staff then have access to a wealth of user demographic information that better allows them to customize and optimize the visitor experience.

“Moving forward with emerging technologies, such as BLE beacons and social media analytics, we believe Ruckus is better positioned to help us deliver a better guest experience and closer visitor interactions on the USS Midway Museum,” concluded Gursky.

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