



ISLAND HOSPITAL PRESCRIBES MIST WI-FI TO IMPROVE CLINICAL EXPERIENCES

Summary

Company:

Island Hospital

Industry:

Healthcare

Business Challenges:

Resolve longstanding issues with Wi-Fi quality and empower clinicians to improve patient care.

Technology Solution:

- Mist Wireless LAN Platform
- Marvis Virtual Network Assistant

Business Results:

- Improved network experience for clinicians and administrative staff
- Ensured reliable connectivity for temperature sensors and other medical equipment
- Reduced Wi-Fi-related trouble tickets by 90 percent

“It has been my life experience that wireless will let me down for no reason,” says Shane Taylor, network engineer at Island Hospital.

The Mist Wireless LAN Platform from Juniper has changed his outlook.

Island Hospital is tucked away in the northwest corner of Washington State, about 60 miles north of Seattle. It is a 44-bed designated Level III trauma facility with a Level II stroke center, and cares for the people of western Skagit County, Whidbey Island, and the San Juan Islands. In 2019, the hospital had more than 120,000 outpatient visits, nearly 18,000 emergency visits, and delivered 400 babies. The hospital employs 750 clinicians, administrators, and other staff, and operates five family care clinics and seven specialty clinics. Medicare patients gave the hospital a four-star rating in 2019.

Chasing Wi-Fi Ghosts

Clinical staff at Island Hospital were increasingly frustrated with the quality of their legacy Wi-Fi service. The hospital’s controller-based wireless LAN system could not keep pace with the demands of healthcare technology.

“Client devices were dropping off of the network, and no one could figure out why, including the manufacturer,” Taylor says. “It was like we had ghosts in the machine.”

In 2018, Taylor set out to find a modern wireless LAN that could support Island Hospital’s healthcare IT objectives. The IT team considered the top wireless LAN solutions on the market, but Mist—at the time a brand-new startup—didn’t make the cut.

“The ability to go into Marvis with free text search and ask what’s going on with a device is incredible.”

- Shane Taylor, network engineer, Island Hospital

“We needed a stable solution that we could put in and not babysit,” Taylor says. “Mist was not under consideration initially because we were apprehensive about trusting new, untested technology with our production workloads.”

As Taylor continued to chase the wireless ghosts with the hospital’s existing wireless LAN vendor while looking for a new system, he became intrigued by the Mist story.

“The founder of Mist is the father of the controller-based architecture, and he started Mist because wireless was stagnating,” he says. “I was concerned at first because Mist was a young company, but sometimes an upstart is a game-changer.”

The nonprofit hospital launched a strategic project to explore the potential of connected hospitals and the future of wireless. “Mist popped back up on my radar and the rest is history,” Taylor says.

“I was amazed when I first started working with Mist by how quickly support would respond to me, and I continue to be amazed every time I have to put in a support request.”

- Shane Taylor, network engineer, Island Hospital

Mist Defies Wi-Fi Expectations

“Since we put in Mist, we don’t get calls about the wireless network anymore,” Taylor says.

The Juniper Mist Cloud Architecture provides scale and agility through a modern microservices cloud architecture. Marvis, the AI engine built directly into the Mist platform, delivers unprecedented IT automation and insight into user experiences.

Island Hospital leverages advanced technology to improve patient outcomes. Now, clinicians have fast, reliable access when entering patients’ vitals, ordering tests, or reading diagnostic images. Wi-Fi-enabled medical equipment, such as infusion pumps, patient monitors, and electrocardiography machines, stay reliably connected. Staff can walk from building to building while engaging in uninterrupted conversation on their wearable VoIP badges. Visitors and patients have easy access to Wi-Fi, while the hospital is protected against security risks.

Clinicians don’t notice the Wi-Fi anymore, and stay focused on patient care. The IT team has seen trouble tickets related to Wi-Fi drop by 90 percent.

Taylor appreciates the streamlined operational efficiency of Mist Wi-Fi, especially in a 24/7 healthcare environment where uptime is critical. With Mist Cloud, the network is always up to date.

“Upgrading the software on a controller can be pretty terrifying,” Taylor says. “Mist is so simple.”

With Juniper Mist Cloud Architecture, Taylor no longer has to pull all-nighters to upgrade the network or add new services.

“We can upgrade the access points in a particular area to test out new versions of code, and then proceed with larger rollouts after we verify that there are no issues,” he says. “With Mist, changes can be rolled back quickly and easily if necessary, which is a big departure from the controller-based wireless LANs.”

Smarter Troubleshooting

“Troubleshooting wireless networks is a nightmare because there are so many variables,” Taylor says. “All the user knows is the wireless is terrible.”

Mist takes the guesswork out of troubleshooting.

“The AI technology in Marvis is powerful,” Taylor says.

“Instead of spending a couple of hours digging through logs to troubleshoot a problem, Marvis can do the deep analysis for me and tell me, ‘Here is the problem, here are the logs to verify it, and here are the recommendations to fix it.’”

Taylor cites an example: The temperature of medical refrigerators, freezers, and incubators must be consistently maintained to safely store vaccines, biological samples, and medications. An IT colleague was installing new wireless sensors, but the sensors were not consistently connecting to the network to report temperatures. Taylor and his colleague were able to use Marvis to help trace the issue to outdated sensor firmware, and the problem was quickly resolved.

“Mist uses clear actionable language,” Taylor says.

With Marvis, network administrators and helpdesk staff can ask questions and get intuitive answers on par with a wireless expert.

“The ability to go into Marvis with free text search and ask what’s going on with a device is incredible,” he says. “Having Mist saves us hours or even days of work.”

Quick Solution for Temporary Wi-Fi

All eyes in the nation were on the Seattle area during the early days of the COVID-19 pandemic. When Island Hospital activated its emergency protocols, it set up tents to screen and triage patients before entering the hospital. Getting connectivity to the tents was the easy part.

“It was a seamless process to install Mist outdoor access points in the parking lot,” Taylor says.

Fortunately, Skagit County didn’t see an early surge of the virus and the tents are no longer needed. “But we have a wireless outdoor solution if we need it,” he says.

A Foundation for the Future

With an AI-driven network, Island Hospital has a foundation for the future. Mist Access Points include virtual Bluetooth Low Energy (BLE) beacons, and the Juniper Mist Cloud Architecture can deliver location analytics, opening new possibilities for using sensors to track newborns, contactless patient check-in, and turn-by-turn directions across the hospital campus.

“When we are ready to do location services, we can just turn on the capability in Mist Cloud,” says Taylor.

As Island Hospital continues to serve the community, it can be confident that it can deliver exceptional network user experiences to clinicians, staff, and patients and their families while streamlining network operations. The hospital can be equally confident that its network is both a game-changer and backed by Juniper’s proven history.

“I was amazed when I first started working with Mist by how quickly support would respond to me, and I continue to be amazed every time I have to put in a support request,” Taylor says.

For More Information

To find out more about Juniper Networks products and solutions, please visit www.juniper.net.

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Juniper Networks brings simplicity to networking with products, solutions and services that connect the world. Through engineering innovation, we remove the constraints and complexities of networking in the cloud era to solve the toughest challenges our customers and partners face daily. At Juniper Networks, we believe that the network is a resource for sharing knowledge and human advancement that changes the world. We are committed to imagining groundbreaking ways to deliver automated, scalable and secure networks to move at the speed of business.

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