PacIOOS, part of the U.S. Integrated Ocean Observing System, provides new tools and forecasts to improve safety, enhance the economy, and protect the environment. Integrated ocean information is available in near real time, as well as retrospectively. Improved access to this information enhances their ability to understand and predict coastal events — such as storms, wave heights, and sea level change. Such knowledge is needed for everything from retail to development planning.

**Challenges**

- Establishing and maintaining an internet connection from remote insular Pacific island locales
- Maintaining and supporting remote kiosks for residents and tourists to provide access to ocean observation and forecast information
- Enabling secure connectivity from anywhere
- Providing remote access support using a variety of platforms and mobile devices

**Solution**

TeamViewer’s unique capabilities and features enabled the PacIOOS Data Systems team to maintain, support, and secure the real-time information provided by remote kiosks to help residents, tourists, and scientists stay safe, have fun, and learn more about the wonders of the Pacific Ocean.

TeamViewer Provides Calm in the Storm of Uncertainty

Most of us consume information of some form throughout our days — from weather and traffic updates to sports scores and movie times — enabling us to plan our days and efficiently manage our time.

For some that need for information about their surroundings is imperative for their families’ and communities’ sustainability.

The Pacific Islands Ocean Observing System (PacIOOS), part of the U.S. Integrated Ocean Observing System (IOOS), monitors and distributes data about the region’s oceanic activities, including wave heights, sea level changes and weather patterns. This information is used for everything from retail and tourism to helping local fishermen and development planning.

Using public kiosks throughout the region, PacIOOS provides residents and tourists with real-time ocean information, offers a variety of forecasts, and inspires users to learn more about the ocean environment.

Joe Gilmore, PacIOOS data systems manager, is responsible for keeping these kiosks up and running. PacIOOS is the largest region within the IOOS system. It spans six time zones across the Pacific Ocean, straddles both hemispheres, and is distributed over an area of nearly 35 million km, including 2,300 individual islands. To provide support at that scale, Joe needed a remote support solution that would enable him to maintain kiosks
in some of the most distant parts of our planet.

"We have kiosks scattered throughout the Pacific, which provide wind direction, ocean currents, and current weather condition information for people to stay informed of what's going on," says Joe. "In some of our really remote areas, like Guam and the Marshall Islands, the kiosks don't necessarily have a solid network to keep them connected to the internet."

In the past, to overcome the internet issue, Joe would bounce a signal out of a local restaurant or hotel where he could reach their wireless network. "When you get out to the remote Pacific, it's really a catch-as-catch-can kind of environment when it comes to the internet," he adds.

The need for a reliable and secure connection is important to ensure availability of information.

**Taking Remote Support to Another Level**

With so much riding on the information these kiosks provide, plus the need to maintain them as efficiently as possible, Joe looked to TeamViewer. Using TeamViewer’s remote support capabilities in his personal life to support family and friends all over the world, Joe had already experienced its reliability. So, it was his first choice to keep these kiosks connected, even in the most remote locations.

"In some remote locations that I have visited, they refer to their internet connection as 'the coconut wireless,' since it isn't so good," Joe explains. "One of the most interesting features of TeamViewer is the ability to use UDP (User Datagram Protocol). Being able to use UDP is extremely important for PacIOOS since there are occasions when getting a reliable connection to the outer regions of the Pacific islands can be almost impossible."

TeamViewer also makes maintaining and supporting those remote kiosks a lot easier for Joe and his team. With kiosks spread out over thousands of miles, having to physically visit each location for manual maintenance would take days and cost the nonprofit a lot of money.

"Manually updating these kiosks would be huge because most of it would be command line driven, which is extremely tedious," he says. "And other remote support solutions just don't match up to TeamViewer since many don't have that..."
With connectivity and security covered, TeamViewer also helps Joe support the readiness of these kiosks from his office, on the ocean or even when he’s out to dinner.

“TeamViewer’s a really great tool since it works with Windows, Linux, Macs, Android, and iOS,” he shares. “I can be out to dinner with my wife, and if one of the kiosks has an emergency and needs support, I can do it from my phone.”

From overcoming connectivity issues to providing best-in-class security to making maintenance quick and easy, TeamViewer makes supporting PacIOOS kiosks smooth sailing.