system76

BIOINFORMATICS

Marine Biology Research

A team of academic research scientists recently partnered with the Woods Hole Oceanographic Institute (WHOI) to improve understanding of the Lost City seafloor formation, which has been considered for special protection by the United Nations Educational, Scientific, and Cultural Organization (UNESCO).

The expedition was led by Susan Lang (Chief Scientist and Professor at the University of South Carolina) and William Brazelton (Co-Chief Scientist and Professor at the University of Utah). William explains the value of studying the Lost City for this project in particular:

"The geochemical processes such as serpentinization that produced Lost City are widespread on the seafloor. The Lost City is an extreme (or perhaps 'pure') example of something that happens all over the ocean to a lesser degree. Therefore, studying the Lost City hydrothermal field helps us to understand a globally distributed natural phenomenon."

The researchers relied on the latest technology to explore this natural underwater treasure, including the Research Vessel (R/V) Atlantis, a remotely operated vehicle (ROV) Jason, a System76 mini desktop computer, and a bevy of other machines, equipment, and materials.

Powered by a 10-kilometer fiber-optic cable, Jason sends the live data and samples of rock, sediment, or marine life from the seafloor to the ship's control room, where a team of pilots and scientists monitors Jason's activities. This and other data was maintained on the System76 machine.

"I used a System76 computer to maintain a database of all of the samples and subsamples we collected during the expedition."

While this computer is only one piece of equipment in a much larger initiative, it was a perfect fit for their needs.

"I ordered the mini PC because its small size, low price tag, and Linux OS made it an easily justifiable expense as 'something to bring along just in case we need it and will still be useful after the expedition anyway.'"

As William anticipated, the expedition didn't mark the end of the project for his hard-working Linux computer.

"It's now in my lab, where it continues to maintain that sample database and also serves as a terminal for accessing our main computational server cluster."

With all the data they collected during the expedition and the prolific nature of the Brazelton Lab, this machine is going to be hard at work for the foreseeable future.

Around the world, biology researchers like William Brazelton rely on System76 computers to collect and analyze data, publish papers, give presentations, and more. A reliable and powerful operating system like Linux supports researchers in their work advancing human knowledge.

Learn more about how System76 laptops, desktops, and servers can support your next project by connecting with the System76 team: https://system76.com/contact