OlCloud

OOICloud provides an open-source platform to help scientists and researchers better understand our oceans and address climate change.





The data is uploaded to Azure Blob Storage which can store and efficiently serve massive amounts of unstructured data.



1. Undersea camera

OOI's CamHD captures one of the world's largest undersea video datasets, which connects to shoreside servers by fiber optic cables spanning hundreds of miles.



3. Pangeo

As a community platform focused on big data in Earth and Ocean Science, Pangeo makes large-scale analysis available to scientists, leveraging Azure Kubernetes Service (AKS).

4. Fast processing

Analyzing hundreds of thousands of images now takes minutes rather than days.



Large-scale research data and insights are now available to everyone.

Challenge

More than a mile beneath the surface of the Pacific Ocean, CamHD delivers over 100 gigabytes of video data each day to shoreside servers. The scientific community was previously able to retrieve CamHD data through a basic web server, but the volume of data created long download times and required excessive disk space for storage. Original data file containers and video codecs further inhibited time-series scientific investigations.

Solutions

Al for Earth has partnered with Columbia University and Queens College to support the analysis of data from the Oceans Observatories Initiative (OOI). Paired with Pangeo's big data analysis and cloud-based solutions from Microsoft Azure, OOICloud gives oceanographers, scientists, and educational institutions real-time access to vast datasets which will help improve our understanding and management of the oceans and help address climate change.



change

