



November, 2014

From Sensors to Decisions with Oceans 2.0 FACT SHEET

What is Oceans 2.0?

Ocean Networks Canada has developed a unique, scalable data management and archive system that provides continuous 24/7 monitoring of data from hundreds of sensors and devices located across the ocean observatories.

Oceans 2.0 was designed principally to support oceanographic research environments requiring advanced instrument control, data acquisition, storage, data management, data analytics and visualization.

The infrastructure is based on a modern service-oriented architecture and the tools (data access, system management, and configuration) are all web-based.

Oceans 2.0 is currently used by hundreds of users from across Canada and around the world to access and interact with the massive data archive from all observatories over a simple web interface.

Oceans 2.0 provides:

- scalable operational software system specifically designed to efficiently collect, archive and redistribute data from underwater sensor networks;
- the necessary tools to manage and monitor sensors and the supporting infrastructure;
- the ability to support hundreds of sensors and keep track of any change and events occurring anywhere within the observatory; and
- an archiving system that is flexible and extensible, supporting the wide variety of data types found in oceanographic instrumentation.

How will Oceans 2.0 support the FORCE Environmental Monitoring system?

ONC will be hosting the data from FORCE's existing infrastructure, providing data access to users of FORCE data and also for general outreach purposes. Initially, a display of select data and visualizations will be shared openly via Internet access, as well as on dedicated devices at the FORCE Visitor Centre overlooking the technology test site in the Bay of Fundy's Minas Passage.

<http://fundyforce.ca/visit/>

Oceans 2.0 will expand the tidal energy research center's data collection, archiving, redistribution and analytics/visualization capabilities as well as offer a scalable, flexible and robust path forward as FORCE continues to evolve its observatory.

What are the benefits to tidal energy exploration in FORCE?

FORCE will be able to take advantage of all existing Oceans 2.0 functionalities, including:

- data search, data product download, video archive and device control;
- robust system security, plus established data backup and redundancy processes;
- scalability that can support instruments deployed in the future;
- private data hosting for commercial clients (such as turbine vendors) as well as open data sharing for researchers and the public;
- a dedicated development team to provide new and improved functionality and tools; and
- exposure to a worldwide audience through ONC's data portal.

For more information:

Oceans 2.0 brochure

<http://www.oceannetworks.ca/sites/default/files/pdf/Oceans2point0Brochure.pdf>

Oceans 2.0 web page <http://www.oceannetworks.ca/technology-services/services/planning-your-observatory/oceans-20>

Related news: <http://www.oceannetworks.ca/observatory-monitor-ocean-turbines>

Contact:

Gord Rees , Oceans 2.0 Business Development

gordrees@uvic.ca 250.721.6357

Media contact:

Virginia Keast, ONC Communication

vkeast@uvic.ca 250.216.7510