

Press Release

Paris, 6th of June, 2018



Project Natick: Naval Group collaborates with Microsoft to deploy underwater datacenter

Microsoft chose Naval Group to implement Phase 2 of its immersed Datacenter project, also called Project Natick. The Datacenter successfully deployed in early June 2018 off the Orkney Archipelago, and will be operated “lights-out^{1*}” for a period of one year.

Eric Papin, Naval Group's Director of Innovation and Technological Expertise, highlights the boldness of the project and Naval Group's participation. "We are proud to bring Naval Group's expertise on design, implementation, deployment and maintenance of innovative projects in maritime environments to the service of Microsoft. Naval Group has always invested in research and development, most recently in Marine Renewable Energies. We are pleased to participate in Microsoft's vision for a clean energy future."

Naval Group and its subsidiary Naval Energies have adapted their technologies to the design of the Natick Phase 2 Datacenter structure.

Today, Naval Group is supporting Microsoft towards its objective to build, deploy and operate an underwater datacenter which is as powerful as several thousand high end consumer PCs with enough storage for about five million movies. The datacenter is contained in a submersible cylindrical system inspired by the underwater constructions of Naval Group. A triangular base (also called Subsea Docking Structure), ensures the positioning of the datacenter at the bottom of the ocean. A dual air-water system enables cooling of the datacenter, thus taking advantage of the temperature of the underwater environment.

Naval Group, with the support of its subsidiary Naval Energies, carried out this project relying on its strong industrial capabilities, involving the sites of Nantes-Indret (design), Cherbourg (model tests), Lorient (subsea base manufacturing) and Brest (design and manufacturing of the pressure vessel²).

¹ A lights out data center is a server or computer room that is physically or geographically isolated, thereby limiting environmental fluctuations and human access. Unnecessary energy used for lighting and for maintaining a proper climate around frequently used doors can be saved by going lights out. Phase 2 Natick is an extreme example, with no human presence for the entire deployment of one year.

² The pressure vessel is the cylinder hull containing the datacenter equipment.

The EMEC³ test base provided a favorable environment for the deployment of Phase 2 of the Natick Project, which is powered by marine renewable energy sources.

The underwater datacenter is designed to remain immersed for 5 years without direct intervention and will be operated "lights-out" for a year to evaluate its performance in real use conditions.

Installed near the coast, this type of installation is less resource intensive, offers rapid provisioning and could be located closer to customers: half of the world's population lives and works within 200 kilometers of the coast.

Ben Cutler, Project Natick Manager at Microsoft Research:

"Microsoft is pleased to collaborate with Naval Group on Phase 2 of Project Natick. Project Natick reflects Microsoft's ongoing quest for cloud datacenter solutions that offer less resource intensive options, rapid provisioning, lower costs, and high agility in meeting customer needs. A key advantage is getting closer to our customers: half the world's population lives within 200 km of the sea, so placing datacenters offshore increases the proximity of the cloud to the population, reducing latency and providing better responsiveness. And by deploying in the water we benefit from ready access to cooling – reducing the requirement for energy for cooling by up to 95%.

Naval Group's deep expertise in innovative marine technologies, including renewables, makes it an ideal choice for collaboration on Phase 2's design, fabrication, and deployment of a standard, manufacturable, rapidly deployable datacenter."

Emmanuel Gaudez

Tel. +33 (0)1 40 59 55 69

emmanuel.gaudez@naval-group.com

Dora GAUER

Mob. +33(0)7 72 42 48 96

Dora.gauer@naval-group.com

³ EMEC : the European Marine Energy Centre– [learn more.](#)

About Naval Group

Naval Group is a European leader in naval defence. As an international high-tech company, Naval Group uses its extraordinary know-how, unique industrial resources and capacity to arrange innovative strategic partnerships to meet its customers requirements. The group offers a wide range of marine renewable energy solutions. Attentive to corporate social responsibility, Naval Group adhere to the United Nations Global Compact. The group reports revenues of €3.7 billion and has a workforce of 13,429 (data for 2017)

www.naval-group.com

About Naval Energies

Naval Energies is a major player in marine renewable energies. Naval Energies contributes to the development of an alternative, renewable and environmentally friendly energy across the world, coming from the most powerful source on Earth: the sea.

For ten years, Naval Energies have been designing and implementing industrial and commercial solutions that meet tomorrow's energy challenges.

Naval Energies is present throughout the entire product life cycle and controls the entire value chain: design, manufacturing, deployment and maintenance.

Naval Energies' development is currently structured around three marine renewable energy technologies: Tidal turbines, floating wind turbines and ocean thermal energy conversion.

www.naval-energies.com

