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# July 26, 2013 **IBERDROLA** and the Barcelona Supercomputing Center Develop the 'Sedar Project'

July 26 -- IBERDROLA and the Barcelona Supercomputing Center - Centro Nacional de Supercomputación (BSC-CNS), are jointly developing a major R&D&I initiative known as the 'Sedar Project (High Resolution Wind Simulation)'.

SEDAR is an innovative project aimed at developing a new computer model to improve estimates of electrical energy production in windfarms before their construction.

Current models have a significant limitation in their calculation times, and this project has succeeded in overcoming this shortcoming through the use of supercomputing techniques. Furthermore, the project will develop improvements for the resolution of physical models which, so far, have been constrained by computing times.

guarantees, as it will provide the most suitable locations for installing the wind turbines and reduce the uncertainty involved in investing in this type of study. This phase of the project, which is done using Alya Green software, can be applied in future onshore and offshore wind farms.

For the Sedar Project, IBERDROLA and the Barcelona Supercomputing Center are using Spain's most important supercomputer, the MareNostrum, one of the most powerful in the world. Both organisations have agreed to carry out the development of the model and its subsequent deployment in IBERDROLA's new windfarm projects in the facilities of the BCS-CNS.

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Source: IBERDROLA SA



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## **Feature Articles**

#### Intel Hits Refresh on Datacenter Vision (/hpcwire/2013-07-26 /intel\_hits\_refresh\_on\_datacenter\_vision.html)

This week at the Intel "Reimagine the Datacenter" event in San Francisco, we talked with the company's HPC lead, Raj Hazra about the general themes that emerged during a series of presentations around efficiency, performance and a new approach to integration across the stack. While not an HPC-oriented set of announcements, Hazra said ...

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#### ALTAMIRA Boosts Scientific Discovery at Spanish University (/hpcwire/2013-07-23 /altamira\_boosts\_scientific\_discovery\_at\_spanish\_univer

Researchers at the Universidad de Cantabria in northern Spain are just beginning to tap into the power of ALTAMIRA, a new 80-teraflop supercomputer cluster installed at the university in 2012. Read more... (/hpcwire/2013-07-23 /altamira\_boosts\_scientific\_discovery\_at\_spanish\_univer

#### HPC to Ride ARM's Lengthening Tail (/hpcwire /2013-07-18/hpc\_to\_ride\_64bit\_arm\_long\_tail.html)

These past couple of weeks we've been looking at what some new additions to the HPC processor arsenal mean for the future of supercomputing--both commercially and in research. While much of the attention has been on Xeon Phi and GPUs, the subject of ARM, now that 64-bit is on the horizon, is also worth ... Read more... (/hpcwire/2013-07-18

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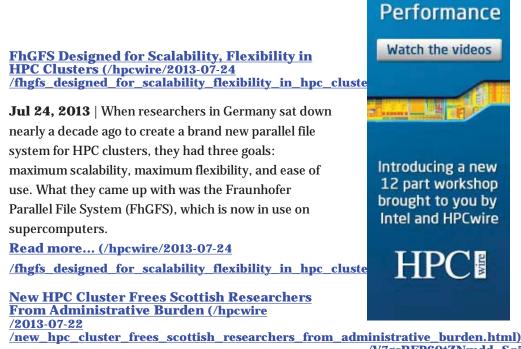
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Jul 22, 2013 | The University of Aberdeen has gone live with Maxwell, a new HPC cluster from Dell that will provide researchers with a faster, more centralized, and easier to manage HPC resource than the university previously had. The system is slated to begin a new era of cross-department collaboration and scientific discovery at the 518-year-old Scottish university.

<u>Read more... (/hpcwire/2013-07-22</u> /new\_hpc\_cluster\_frees\_scottish\_researchers\_from\_adm

Green Flash Heralds Potential Breakthrough in Climate Modeling, Exascale Design (/hpcwire /2013-07-18 /green\_flash\_heralds\_potential\_breakthrough\_in\_climat

**Jul 18, 2013** | Researchers across scientific disciplines are clamoring for exascale systems that can handle bigger, more complex models. When it comes to the climate modeling and weather forecasting business, researchers are finding promise in using new HPC architectures, such as the one used in the Green Flash cluster, to get closer to the exascale goal.

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<u>inistrative\_burden.html)</u> /V7gsREP60tZNmdd\_Sq5l2wUYEeJykt\_DdyksG16Zo9 HPC Job Bank

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<u>Considerations in HPC Cluster Network</u> <u>Selection (/hpcwire/2013-07-17</u> /considerations_in_hpc_cluster_network_selection.html)	Featured Events	
<b>Jul 17, 2013</b>   There's a lot going on in the networks of HPC clusters, and selecting the right network fabric,	IIIStampedeCon Big Data Conference 7/30-31, St. Louis	(http://stampedecon.com /register/) July 30, 2013 - July 31, 2013
equipment, and topology is important to ensuring good performance for given applications. A "one size fits all" approach rarely works, and architects will do well to tailor the network to the needs of the application. <b>Read more (/hpcwire/2013-07-17</b>	Stampede Con /register/) St Louis, MO United States	(http://stampedecon.com
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Jul 16, 2013   For decades, musicians have been using	(https://www.usenix.org/sec13/hpcwire)
sound synthesizers to generate audio to replace or	Washington, DC
complement acoustic instruments. However, some	United States
types of complex south synthesis have not been possible	
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needed to take on tougher audio challenges.	
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the aim of exploring the end-to-end process employed	New York City, NY
by digital manufacturing engineers to access and use	United States
remote computing resources in HPC centers and in the	
cloud. This Compendium of 25 case studies is an	SC13
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face with the challenges – and opportunities – afforded	
by Big Data. Before anyone can utilize these	
extraordinary data repositories, however, they must	(/ct/o
first harness and manage their data stores, and do so	<u>(/ct/e</u>
utilizing technologies that underscore affordability,	
security, and scalability.	Conference and
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Xyratex, presents ClusterStor at the Vendor Showdown at ISC13 (/multimedia/2013-07-15 /xyratex\_presents\_clusterstor\_at\_the\_vendor\_showdown

Ken Claffey, SVP and General Manager at Xyratex,

in Leipzig, Germany.

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**HPCwire Live! Atlanta's Big Data Kick Off Week** Meets HPC (/multimedia/2013-06-14 /hpcwire\_live\_atlanta\_s\_big\_data\_kick\_off\_week\_meets\_hpc:\_what\_does\_the\_future\_holds\_for\_hpc\_.html)

Join HPCwire Editor Nicole Hemsoth and Dr. David Bader from Georgia Tech as they take center stage on opening night at Atlanta's first Big Data Kick Off Week, filmed in front of a live audience. Nicole and David look at the evolution of HPC, today's big data challenges, discuss real world solutions, and reveal their predictions. Exactly what does the future holds for HPC?

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