

Case Study

Northern (Arctic) Federal University

»We are delighted that the university now has a powerful tool for high-performance computing. There are not many universities in Russia that can boast computer systems of this level. The supercomputer, built on Fujitsu server solutions, will be primarily designed for training undergraduates and masters students and will also help in complex scientific research«

Professor Elena Kudryashova, Rector of the M.V. Lomonosov, NARFU



The customer

The M.V. Lomonosov Northern (Arctic) Federal University (NARFU) is a new research and educational innovation center in the Russian system for higher professional education. It was founded by Russian Federation Presidential Decree No. 1172 of 21 October 2009 and began operating in June 2010 when its Certificate of State Registration was received. NARFU trains specialists in engineering, technical, mathematical, natural science and humanities subjects. The scientific potential of the university includes 114 doctors, 787 candidates of science, 14 PhD students, 333 postgraduates and 436 masters' students.

The strategic objective of NARFU is to ensure innovative scientific and human resources support for protection of Russia's economic interests in the North Arctic region, by creating a system of continuous professional education, integration of education, science and production and strategic partnerships with the business community.

The challenge

NARFU was in need of a computing system to perform complex scientific research in mathematics, informatics and space technologies. The university heads decided to create an additional computer cluster in their data center, the basis of which was formed by server solutions from the world's leading vendors.

When choosing a supplier to build its supercomputer, NARFU set strict requirements on power, quality and reliability of components, required to create the computing cluster.

The solution

Fujitsu specialists created a cluster that includes 20 computing nodes (PRIMERGY servers), two management servers, a data transfer network and ETERNUS DX data storage systems. The latest computer architecture is based on Intel Xeon Phi coprocessors. In addition to the hardware, a graphic cluster management interface and a FEFS (Fujitsu Exabyte File System) parallel file-based data storage system was introduced, both developed by Fujitsu.

The customer

Country: Russia
Sector: Higher education
Founded in: 2010
Website: www.narfu.ru



The challenge

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The solution

The university heads decided to create an additional computer cluster in their data center, the basis of which was formed by server solutions from the world's leading vendors. The department for programming and high-performance computing of the Institute of Mathematics, Information and Space Technologies, NARFU, was the initiator of the purchase, choosing servers and data storage systems by Fujitsu. Fujitsu's rich Russian and international experience in the building of such clusters served as the decisive factor in the final choice of supplier for the equipment to be used in the project.