

## Energy-efficient and safe environment for Switzerland's fastest supercomputer

Siemens has supplied the new Swiss National Supercomputing Center (Centro Svizzero di Calcolo Scientifico, CSCS) with state-of-the-art technology capable of managing and controlling its building automation, safety and security systems. The center houses the fastest computers in the country and facilitates world-class scientific research by pioneering, operating and supporting leading-edge supercomputing technologies.

In addition to protecting the computing systems and the stored information – and thereby minimizing the possibility of downtime or even total loss of data – computing centers are today looking for infrastructure solutions that are also energy-efficient and environmentally friendly. The integrated solution for CSCS designed and provided by Siemens covers the center's infrastructure needs, ensuring the highest levels of building performance and energy efficiency, as well as its entire safety and security requirements. The solution manages and controls all the different facility subsystems, whilst metering and monitoring the center's power consumption. Maximum system reliability and availability is assured throughout the entire lifecycle of the infrastructure.

### Comprehensive building technologies

The safety solution comprises IP cameras, along with a Sinteso fire detection system, integrated via BACnet (Building Automation and Control Networks), the communications protocol for building automation networks. The fire detection system includes four hundred and thirty detectors, twenty-eight manual call points and two hundred and twenty eight alarm indicators. The integrated voice notification system, supporting the full-scale evacuation of the building if needed, consists of four power-speakers, two hundred and fifty loudspeakers and sixty-two strobe lights. To provide simple and intuitive control of all the building systems, a Desigo Insight

management station with over four thousand data points and twenty-one controllers is installed. By utilizing the water from nearby Lake Lugano to provide cooling for the supercomputers, CSCS has become more energy-efficient and ecologically sustainable.

A decisive factor in the choice of Siemens as supplier of the integrated data center solutions for CSCS was the advantage of a complete solution from a single supplier. Siemens handled every aspect of the project, from design through project management and installation to on-going maintenance of the system afterwards. The proximity of Siemens' service technicians in the Swiss canton of Ticino enabled any problems or issues arising along the way to be resolved speedily. In a sensitive environment such as a supercomputing facility this is vital in order to minimize intervention times.

**Contact for journalists:**

Catharina Bujnoch, phone: +41 41 724-5677

E-mail: [catharina.bujnoch@siemens.com](mailto:catharina.bujnoch@siemens.com)

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