



CSC – SERVICES

CSC – IT CENTER FOR SCIENCE PROVIDES AND DEVELOPS VERSATILE INFORMATION TECHNOLOGY AND TRAINING SERVICES FOR THE NEEDS OF ACADEMIA, RESEARCH INSTITUTES, STATE ADMINISTRATION AND COMPANIES.

FUNET Services

The Finnish research and education network, Funet provides national and international high-capacity data communications connections to all higher education institutions in Finland and for 37 state research institutes and other organizations.

Information Management Services

Information Management Services supports the national science and education policy and academic management and administration by providing IT consulting and planning and cost-effective hosting services for shared and centralized information systems.

Data Services for Science and Culture

Data Services for Science and Culture maintains and develops computer equipment and provides services to meet data storage and database needs. CSC develops operational practices and tools for long-term data archiving in cooperation with national memory organizations concerned with documenting the past.

Application Services

Application Services offers a wide selection of scientific software, providing management, training and system support for the required licensing and consortia relating to them. Application Services is also responsible for maintaining and developing CSC's own software products for research needs.

Computing Services

Computing Services maintains and develops a high-profile computing environment to meet research needs. Computing Services offers researchers and higher education institutions expertise in scientific computing and IT consulting, including algorithm design, code optimization, and parallelization, computing projects, and acquisition of server hardware.

FUNET NETWORK SERVICES

FAST RESEARCH AND EDUCATION NETWORK – VERSATILE NETWORK SERVICES

We maintain and develop Funet, the Finnish University and Research Network, a superfast data communication network in the service of research and education. Funet links the universities, polytechnics and research institutions improving their national and international communications. Funet has approximately 350,000 users. Funet is one of the most advanced research networks in the world.

Funet services include:

- High-speed networks and Lightpaths
- Funet CERT network security services
- eduroam roaming access service
- Campus support

The pan-Nordic NORDUnet network provides access to all international services and links to global research networks, such as the pan-European Géant2.

DATA SERVICES FOR SCIENCE AND CULTURE

SOLUTIONS FOR DATA STORAGE, MANAGEMENT AND ANALYSIS NEEDS

We provide services for long term data storage, databases, data mining, analysis and visualization. Reliable backup and archive services form the core of our data management. We give special services for several scientific disciplines like biosciences, chemistry, and linguistics.

We maintain the following services and databases to meet your needs:

- Data storage services
 - For short- and long-term storage
 - Storage capacity tailored to need
- Data management services
 - Preservation, life cycle management
- Databases
 - 70 scientific databases, extensive GIS data
- Data processing services
 - Data mining, visualizations, massive data sets
- Consultancy on data storage, preservation and analysis

The Finnish academic library systems, for example, are managed in our service environment:

- LINNEA – a shared library system for Finnish universities
- ARMAS – a shared database for Finnish polytechnics
- NELLI – a national information retrieval system

INFORMATION MANAGEMENT SERVICES

RELIABLE, COST-EFFECTIVE AND CENTRALIZED INFORMATION TECHNOLOGY SERVICES

Our service platform covers:

- Centralized data management services
- Maintenance and development of the information systems
- HAKA user identification system
- Consultancy services

Expertise in higher education

We maintain and develop information systems especially for state administration of education and science.

- HAKA – a shared user identification system of universities, polytechnics and research institutions in Finland
- KOTA – a database providing statistics for performance monitoring in universities
- AMKOTA – a database providing statistics for performance monitoring in polytechnics

Reliable consultancy

Our customers can consult our specialists on their IT projects and development issues. We can also coordinate survey studies or participate in the development of IT management according to our customers' needs.

We specialize in the following fields:

- Project planning and invitations for tenders
- Electronic transactions
- Development of user management
- Data security

APPLICATION SERVICES

SUPPORT, DEVELOPMENT AND INFRASTRUCTURE FOR COMPUTATIONAL SCIENCE AND ENGINEERING

We provide CSC's customers with internationally competitive and reliable computing resources and multidisciplinary IT-specialist services.

We maintain the following programs and services at your disposal:

- Finland's widest software selection for scientific and engineering research – 200 scientific programs
- Consultancy services on our scientific programs
- Open-source software development

We actively participate in international science and technology collaborations. CSC is at the forefront in European Grid software development.

Our computer environment supports centralized management of massive databases. In our software library, you can find programs relating to various disciplines.

- Chemistry, physics, biosciences
- Environmental sciences and geosciences
- Mathematics, statistics and nanoscience
- Computational fluid dynamics, structural analysis

The software library comprises both freely distributable academic programs and commercial programs subject to a license fee. Our customers have remote login access to CSC's computers, databases and scientific programs through the Funet network.

COMPUTING SERVICES

HIGH-PERFORMANCE COMPUTING AND IT CONSULTING SERVICES

To meet computational needs of research and development, we provide resources of the highest level. For customers who require outstanding computing power we have massively parallel systems. Moreover, CSC's versatile computing environment includes the most important scientific applications and databases.

Supercomputers

CSC's supercomputers can run even the most demanding parallel programs efficiently. The computing power of a supercomputer can be thousands of times higher than that of a single processor and with parallel computing one can typically shorten the run time of a program significantly. The most powerful of CSC's computers, a Cray XT4/XT5 system called Louhi, currently has theoretical peak performance of more than 10,000 billion floating point operations per second.

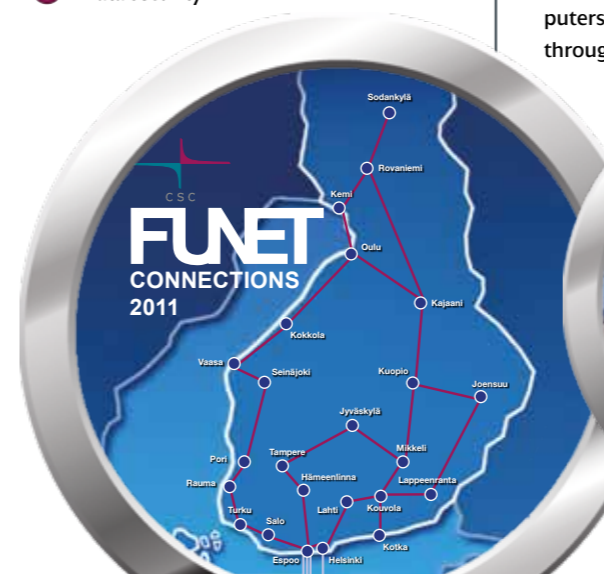
Our customers can consult our specialists in scientific computing and information technology.

Our fields of expertise include:

- Design of algorithms
- Code optimization and parallelization
- Computing projects
- Development and support of Grid Infrastructures

CSC is an active member in The Partnership for Advanced Computing in Europe, PRACE, a pan-European Research Infrastructure for High Performance Computing (HPC).

CSC represents Finland in the European Grid Infrastructure EGI.eu organization.





INFO

Our experts combine the services you need into a tailored and flexible package for you.

Please contact our customer service:

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