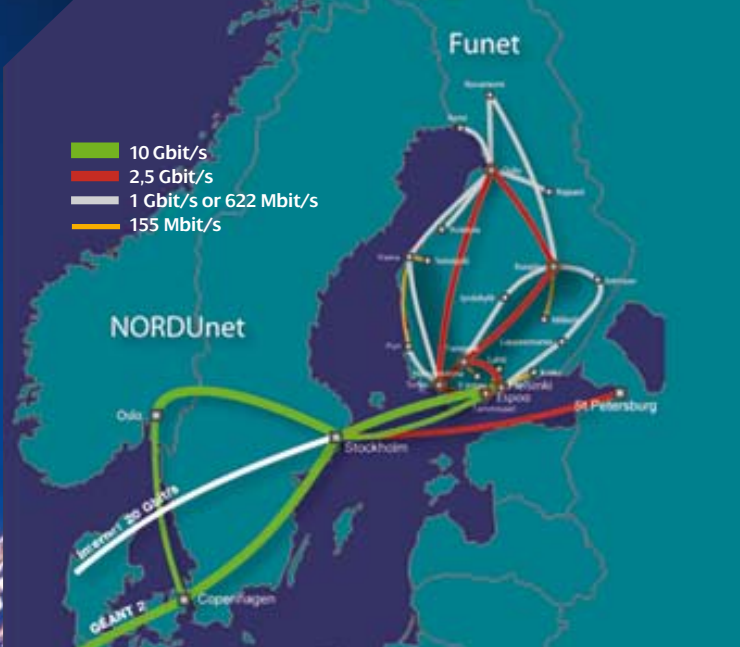




FUNET SERVICES





FUNET

Funet is the Finnish research and education network and service provider. As an exceedingly reliable high capacity network it links the entire research community and institutes of higher education to each other in Finland, the international research networks and the Internet.

The Funet services are provided by CSC, the Finnish IT Center for Science working in close collaboration with the Funet member community.

Funet community

Funet services benefit approximately 80 member organizations serving more than 350 000 users in total. Members include the universities and polytechnics in Finland, student dormitories, university hospitals, and numerous state-owned research institutes and other public organizations.

The Funet Association, founded by member organizations, supports and supervises Funet activities. Together with the members Funet arranges joint development projects to advance network services and applications. Funet also organizes information and training sessions, e.g. Funet Technical Days, for the customers. Funet contributes to the international development of communication networks by collaborating with the Trans-European Research and Education Networking Association TERENA and the Internet Engineering Task Force IETF etc.

Funet services

- Reliable high capacity network connections between members, to the international research networks, and the Internet
- Network security services – Funet CERT
- Extensive service portfolio: ISP services, wireless network roaming, user administration services, IPTV, video conferencing, and content sharing services
- Consultancy and specialist services
- Courses and seminars
- Collaboration forums

Funet network

The **Funet network** covers all major research and higher education centers in Finland. Funet is connected to international research networks through NORDUnet, the pan-Nordic backbone network serving all the national research networks in the five Nordic countries.

The network enables utilization of advanced technologies, such as IPv6 and multicast. In addition to the Funet backbone connection, we also provide backup links and additional connections to meet special needs. Funet

Network Operations Center or Funet NOC is the contact and service point for customers, making sure that the network and services run smoothly. As Funet ISP services, we provide network time service, DNS hosting and support services, such as the registration of IP addresses and secondary DNS name service. We also provide USENET newfeed and newsread services.

Lightpaths

New scientific applications and instruments produce unseen amounts of data, the transfer and handling of which necessitates high performance connections and large-capacity data storage. Numerous research groups use the Funet network to utilize global research infrastructures, such as major research instruments, scientific databases, and supercomputers.

To meet the special needs of data-intensive research, we offer **Lightpaths**, dedicated optical end-to-end network links for transferring the customer's research data at extremely high speeds. Along with the increasing usage of advanced video technologies, the new high-speed connections bring benefits also for education.

Our specialists provide support on all types of high-capacity use of the networks and on troubleshooting possible performance bottlenecks.

Funet CERT security services

Funet CERT network security service and collaboration aims to reduce data security risks. We collect and disseminate information on data security threats and incidents, provide help in protecting against virus and spyware software and Denial-of-Service (DoS) attacks, and in filtering spam. We also support detection of data security violations and cooperation with the authorities.

Video conferencing

The **video.funet.fi** website provides support on **video conferencing** for teaching. Funet users



can utilize the EVO videoconferencing service. We participate in the AccessGrid network that enables our customers to participate in global research collaboration through high quality conferencing tools. For end users as well as for organizations, we also provide a connecting service of multiple source video streaming, in which meetings can be held based on videophone numbers (VideoPark and CSC Gate services).

Funet Antenna – television brought to Funet

Funet Antenna provides the Funet member organizations with access to the public digital television channels using their own computers. The service makes also possible for organizations to broadcast their own content in digital television format. The channels are viewable for those Funet organizations which support multicast technology. A free-of-charge agreement with Maxisat is also required, for the Funet Antenna service is based on the Maxinetti PCTV service.

Content sharing services

CSC's Media Archive contains lectures, video conferences and other teaching material with new content being added continuously. The **CSC Stream** video streaming service provides our users with an easy web-based way to directly disseminate their video material for their own audience. We develop services to support e-learning in collaboration with universities.



The **ftp.funet.fi** file server archives and distributes public domain software and documents. The **ePoste Restante** and **ePort Payé** services help in the transfer of files too large to sent as email attachments.

eduroam network roaming

Funet is the national coordinator of the academic network roaming service called **eduroam**. eduroam provides transparent guest access to the wireless networks by using the user's home organization's credentials.

Network roaming is available not only in Finland but in most European countries, and it is continuously spreading in other countries, e.g. Australia, Japan, and soon the USA.

ADDITIONAL INFORMATION

www.eduroam.fi

HAKA user authentication

Haka is a shared user identification system for institutes of higher education and their service providers. The user needs only the user name and password combination issued by the home institution for safe login to services provided by their own or other participating institutions. The integrated user management brings flexibility and efficiency to the use of network services beyond organizational limits.

Haka facilitates

- access to academic libraries' electronic materials and services
- the use of learning environments and tools to support teaching
- implementation of shared services and portals for higher education
- user identification in the ASP services for finance and personnel administration
- networking between lecturers, researchers, and developers at universities and polytechnics

ADDITIONAL INFORMATION

www.csc.fi/suomi/funet/middleware

SERVICES PROVIDED BY CSC

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

We are committed to enhancing and supporting our customers' operations through our state-of-the-art IT services.

We are the national research and education network provider in Finland.

We are the biggest supercomputer center in the Nordic countries. CSC is a non-profit company, administered by the Finnish Ministry of Education.

Our experts combine the services you need into a tailored and flexible package for you. Please contact our customer service at contact@csc.fi

CSC, the Finnish IT center for science
Life Science Center,
Keilaranta 14, P.O. 405,
FIN - 02101 Espoo
Tel. +358 (0)9 457 2001
E-mail:
firstname.surname@csc.fi

 www.csc.fi



CSC, the Finnish IT center for science
Life Science Center,
Keilaranta 14, P.O. 405,
FIN - 02101 Espoo
www.csc.fi