

GARR Services

www.garr.it/servizi

GARR provides a wide portfolio of services dedicated to the Italian Research and Education user community.

Operation Services deal with every aspect of daily network management, and include network configuration, circuits and router/switches maintenance, upgrade and configuration, response to faults and malfunctions, response to security incidents, domain names registration and allocation of IPv4 and IPv6 addresses. The operation services portfolio includes also advanced services such as a Certification Authority, Authentication and Authorization support and support to mobility (Eduroam).

Application Services are intended to support a variety of user application that connected organizations offer to end-users. Currently, they include a service for the distribution of most requested items (software packages, including the full major open-source distribution, documents, etc) available on the Internet, an Internet news service, a multi-videoconferencing service (VConf) to enable audio and visual communication amongst all connected users.

An advisory and support service on advanced multimedia and netcasting completes the service portfolio.

Operation Services

GARR-NOC: Network Operations Center

The NOC is responsible for the daily network management, fault resolution, activation of new links, collection and publication of network traffic statistics; furthermore, the NOC is responsible for configuring Multicast, IPv6 and Premium IP network services, and collaborates with GARR-CERT to contrast security problems and attacks.

The NOC operates the Network in close interaction (collaboration) with the connected organizations' official technical contact person (APM - Access Port Manager), with telecom operator, the GÉANT network NOC and all peering entities outside the GARR community.

<http://www.noc.garr.it>

GARR-CERT: security incidents prevention and response

The network security service GARR-CERT assists GARR users in handling computer security incidents and in the implementation of prevention measures of security risks.

The GARR-CERT is responsible for:

- Responding to network security incidents, in close collaboration with GARR-NOC;
- Disseminating information on most common vulnerabilities and available security tools;
- Organising tutorials for end-users;
- Issuing directives defining minimum security requirements for computers connected to the network, and monitoring their actual implementation;
- Testing available security tools, and developing new ones for specific security requirements.

<http://www.cert.garr.it>

GARR-CA: Certification Authority

The GARR-CA (Certification Authority) service issues:

- Personal X.509 certificates, to sign and encrypt documents;
- Server X.509 certificates, to enable encrypted data transfer for users accessing web, email, or other SSL-enabled services and to guarantee users about the server's identity.

GARR-CA takes part to the European Server Certificate Service (SCS) initiative, that aims at providing NRENs' users with server certificates issued by a commercial Certification Authority that are automatically recognized by most web browsers. Certificates are issued for education purposes (i.e., they cannot be used for verifying commercial transactions) and are provided free of charge to GARR end-users. GARR-CA also provides periodical training courses aimed at the "Certificate Registration Authorities" personnel located at GARR users' sites.

<http://ca.garr.it>



APM

APMs (Access Port Manager) are usually the managers of Local Area Networks or Campus Networks, and the official technical contact person in the connected organizations.

GÉANT

GÉANT is the generic acronym for the high-bandwidth, research and education European backbone serving Europe's research and education community through NRENs.

Multicast

Multicast is a network technology for the delivery of the same information to a group of destinations simultaneously using the most efficient strategy to deliver the messages over each link of the network only once. It is often employed for streaming media and Internet video applications.

IPv6

V6 is the next generation IP protocol and enables innovative network services and new functionalities in applications. IPv6 key feature is a much wider addressing space that will solve the shortage of public IP(v4) addresses.

PREMIUM IP

Premium IP is a multidomain service that offers quality of service to selected network flows over other traffic between two user end points

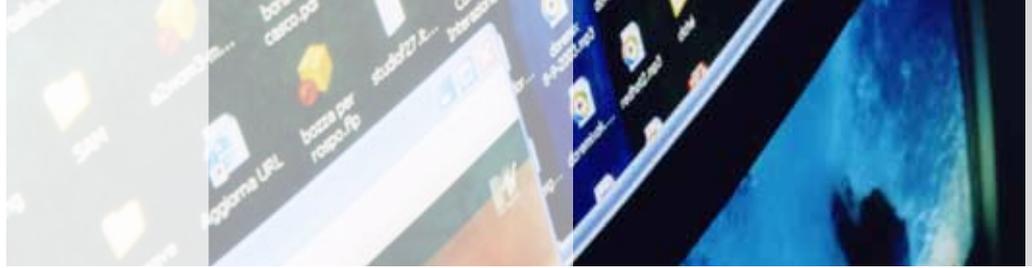
NREN

NREN is an acronym for National Research and Education Network.



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GARR-LIR, GARR-NIC, GARR-DNS: IP and Domain Name registries

Intended for GARR users only, the GARR-LIR and GARR-NIC services attend to the following:

- Allocation and registration of Domain Names under .IT and .EU;
- Maintain information relative to IP (v4 and v6) address ranges allocated to each organization;
- Allocation of new IP (v4 and v6) addresses;
- Maintaining the GARR DNS servers;
- Assisting users in configuring their own DNS servers;
- Allocating ENUM prefixes.

<http://www.lir.garr.it> <http://www.nic.garr.it>

GARR-AAI: Authentication and Authorization Infrastructure

The GARR Network Authentication and Authorization Infrastructure (AAI) enables simplified federated access to services amongst different organizations.

By exploiting the federation paradigm, end users from member organizations can use the same credentials and a standard procedure to access any resource within the federation (according to their authorisation credentials). The service is engineered and deployed based on results achieved by the GARR-IDEM (IDEntity Management) pilot project.

<http://www.idem.garr.it>

GARR-EDUROAM: mobility support for the GARR user community

The Eduroam (Education Roaming) service manages the infrastructure to provide secure wireless access to international roaming Research and Education users.

Being part of Eduroam allows users to access the local wireless network (WLAN) in a visited institution (also connected to Eduroam) by using the same access credentials the users would use if they were at their home institution.

<http://www.eduroam.it>

Application service

GARR-VCONF: multi-videoconferencing service

GARR multi-videoconferencing service (Vconf) is an advanced tool enabling audio-video communication between different sites through the GARR network and beyond.

The service includes:

- A Multipoint Control Unit that enables up to 40 participating sites to share a virtual room regardless their geographical location, plus an additional up to 40 audio-only connected sites; this includes a wide range of access possibilities via most of existing clients/protocols.
- An user-friendly web interface for reserving and managing/moderating virtual rooms;
- Possibility of broadcasting live the videoconferences;
- A help-desk service to assist users in exploiting the service and solving any faults or problems in reserving or using the service;
- An online self-learning course and a documentation system;
- A constant service monitoring to ensure the smooth operation of virtual rooms during meetings.

<http://vconf.garr.it>

GARR-MIRROR: public software distribution

The GARR-MIRROR provides reliable and fast access to download software distributions and other frequently asked material, including the whole distribution of the open source project Sourceforge.net. The GARR ftp-mirror archive consists currently of about 27 Terabytes, however the selected solution ensures wide scalability. Peer-to-peer distribution techniques (i.e., for instance, Bit Torrent) are currently being tested in order to widen the service offer.

<http://mirror.garr.it>

GARR-NEWS: Usenet News distribution service

The GARR-News service enables the aggregation and distribution of usenet news. The service provides the distribution of the whole Italian usenet news feed and part of the international ones to managers of local news servers (second level news servers).

Moreover, the service distributes posted articles at a national and international level.

<http://news.garr.it>



LIR

A LIR (Local Internet Registry) attends to allocation of IP addresses on behalf of its user community

NIC

The term NIC (Network Information Centre) is commonly used to define registries of Top Level Domains.

DNS

The DNS is the system used on the Internet to translate domain names into IP addresses and vice-versa

ENUM

ENUM ((t)Elephone NUmbering Mapping) is a suite of protocols that allows unifying the telephone numbering system E.164 with the Internet addressing system by using an indirect lookup method based on DNS.

WLAN

Acronym for Wireless Local Area Network.

FEED

A feed is an information unit, formatted according pre-defined specifications to make the content interoperable and interchangeable between different applications and platforms.

