

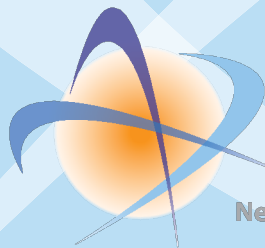
RIPE 67

Welcome by the host

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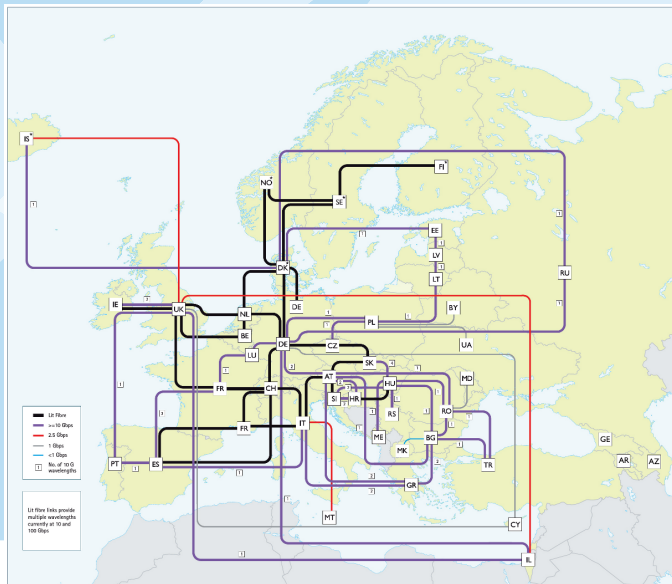
grnet

Networking Research and Education

NRENs Mission and Objectives



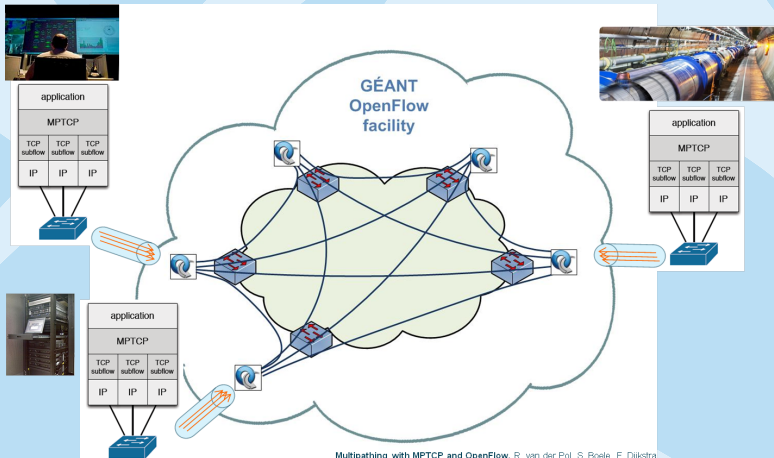
pan-European Community



Backbone topology as at August 2013. GÉANT is operated by DANTE on behalf of Europe's NRENs.

grnet

LHCONE use case



Multipathing with MPTCP and OpenFlow, R. van der Pol, S. Boele, F. Dijkstra,
A. Barczyk, G. van Melensteijn, J. H. Chenx and J. Mambretti
<https://nec.sara.nl/nrc/publications/SRS-2012-2-multipath.pdf>

Innovative services for the R&E community



Firewall on Demand

Enables GRNET customers to filter or mitigate flows with non-legitimate traffic (DoS/DDoS) targeting their border router or internal networks.

RFC5575 BGP-Flowspec

A Border Gateway Protocol Network Layer Reachability Information (BGP NLRI) encoding format that can be used to distribute traffic flow specifications.

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DNSSEC deployments

According to a study carried out by CircleID¹ regarding DNSSEC deployment, the GRNET ADSL student service ranks 3rd worldwide.

- ▶ 97.28% of the user base performed *always* DNSSEC validation;
- ▶ 0.84% of the user base performed *some* DNSSEC validation;
- ▶ 1.88% of the user base *did* not perform DNSSEC validation.

99.16% of the DNSSEC loyal users utilised explicitly GRNET servers while a 0.63% only Google's Public DNS servers.

¹http://www.circleid.com/posts/20130717_dns_dnssec_and_google_public_dns_service/

Cloud services for the R&E community



Computational



Networking



Virtual disks



Security

Cloud services for the R&E community



Computational



Networking



Virtual disks



Security



Federated services

Single Sign On infrastructure

relies on SAML 2.0 and enables the trustworthy exchange of information related to identity, authentication and authorisation of users within a federation.

eduroam

is the secure, world-wide roaming access service developed for the international research and education community.

Thank you