The Research & Education Networks in Europe

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Who we are?

• Pioneers of the Internet.
• Commercial sector was (is) not able to answer the specific needs of the research community.
• We deployed internet services 10 years before the commercial sector.
• Dedicated organizations serving 40 million users in over 8,000 institutions across 40 countries:
  mainly universities, colleges, research centers BUT also in some countries: primary & secondary schools, cultural organizations, health sector, public administrations.
Who we are?

- At the European level, we coordinate our actions via 2 organizations:
  - TERENA the European association of the NRENs;
  - Dante the operational arm of the NRENs for the provision of international services.
Most visible achievements

• The GEANT & NREN networks constitute together
  – A high bandwidth, high performance hybrid pan European network able to:
    • provide a quasi “unlimited” bandwidth;
    • provide on demand high speed point-to-point connections throughout Europe (10G lambdas).
  – The most advanced native IPv6 backbone
• Federations/Edugain: seamless and secure access to content and service providers.
• Eduroam: seamlessly and securely facilitate the mobility of students and researchers within Europe.
• CERT trainings and accreditations.
• TERENA Certificate Service: authentic and secure access to servers.
Importance of the EC support

• Financial support represents 1/30th of the global budget of all the NRENs BUT it has a major impact:
  – Facilitate the adoption of advanced (more expensive) technical solutions;
  – Ease the creation of a common technological vision;
  – AND it added an international political dimension to our actions:
    • A presence in every continent;
    • Europe a worldwide leader in the field of R&E networking;
    • Adoption of a solidarity principle;
    • Close the digital divide gap between European countries.
Benefit for the society

• Our community was/is deeply involved in the creation of the building blocks of the European internet, e.g.:
  – Domain Name Registration (DNS);
  – Internet eXchanges (IX).
• By providing unlimited access to internet services, we are creating demand, usage and awareness speeding up the development of an information society.
• We are helping to close the digital divide gap.
• We are addressing security concerns:
  half of the 150 European CERTs from government, industry and academia have followed the TERENA trainings courses and have been accredited by them.
Conclusions

• The NREN have a bright past.
• The last 20 years we have successfully demonstrated our value not only for the R&E community BUT also for all the society.
• The collaboration with the EC has proven to be very successful for both parties.

• The following 10 years we will be a key player realizing the 2020 vision:
  Building Europe’s capability to be at the forefront of worldwide research and technological advancements.
• Thank you for your attention

• For more information go to:
  – www.dante.net
  – www.terena.nl