

GARR, LightNet and University of Trieste: best score in innovation with the Next Generation Networks

University of Trieste is now connected to the GARR-X National Research and Education Network at 10 Gbit/s, thus becoming one of the 10 “superconnected” universities in Italy.

Today 10 is the lucky number for Trieste and its scientific community: the University’s access link to GARR-X, the Italian ultrabroadband network for research and education has just been upgraded from 1 to 10 Gbit/s, making University of Trieste one of the top 10 Italian universities in terms of available bandwidth. Such high capacity that the University can now offer the new link to other research and education organizations located in Trieste, to use as a backup of their interconnection with GARR-X, an arrangement made possible by the specific configuration adopted on the LightNet R&E Metropolitan Area Network.

The initiative for the creation of a Metropolitan Area Network dedicated to the research and academic community, and owned, designed and managed by the community itself in order to better meet its specific requirements, started exactly 10 years ago. The 10 most prominent Research and Education organizations in Trieste then united in the “LightNet” project, co-ordinated by University of Trieste with direct participation by Consortium GARR, the organization operating GARR-X.

As of today, LightNet interconnects the main scientific, research and education institutes in Trieste with a widespread network of over 300Km of optical fiber. The network is used for joint projects and to access at very high bandwidth the GARR-X PoP, hosted by the University’s Information Infrastructure and Service division. Bandwidth availability over the network has increased 10 times every three years. Each organization now has a primary link to GARR-X, plus a backup one, thus ensuring optimal robustness and resilience to the access network. LightNet and GARR-X share the same optical transmission technology. This can be regarded as a successful example of “interconnection”, not only in technological terms, but also in a strategic perspective, with the objective of smoothly bringing resources and network services up to the end-user: computing grids, supercomputing, storage, big data, e-learning and distant learning, multimedia, visual and performing arts, and much more.

LightNet directly interconnects to ARNES, the Slovenian Research and Education Network: this 90 Km “telecommunication passage” uniting Trieste to Ljubjana, allows GARR to route all international R&E traffic between Italy and Slovenia through Trieste. This link (and a planned one from Gorizia) is also an important step in the “Cross Border Fiber” strategy, intended to enhance the reliability of GARR-X interconnection with Europe by creating fiber links to the neighbouring Countries’ NRENs in order to complement the direct links to the 100 Gbp/s European backbone GÉANT. A picture in which Trieste plays a key role, unimaginable only 10 years ago.

Further information:

On LightNet: <http://www.lightnet.trieste.it>

On GARR-X: <http://www.GARR.it/a/rete/GARR-x>

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