

Case Study

GÉANT leverages EXA Infrastructure assets to empower research and education

Sector: Research & Education

Services: Dark Fibre, Colocation, Wave, Ethernet

The customer

GÉANT is a fundamental element of Europe's e-infrastructure, delivering the pan-European network for scientific excellence, research, education and innovation. Since its establishment more than 20 years ago, the GÉANT network has developed progressively to ensure that European researchers continue to lead international and global collaboration. Through interconnections with its 40 national research and education network (NREN) partners, the terabit-ready GÉANT network is the largest and most advanced R&E network

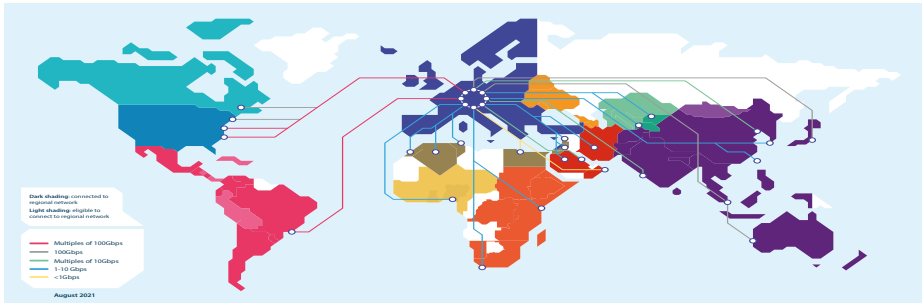
in the world, connecting more than 50 million users at 10,000 institutions across Europe, and reaching in excess of 100 countries worldwide.

GÉANT's mission is vital in facing today's major societal and scientific challenges, needing the support of researchers and teachers around the globe. To overcome these challenges, network availability and reliability is critical, as demands on networking infrastructure continue to grow – demonstrated by an average annualised increase in network traffic of 30% per annum for each of the past five years. In 2020, the backbone network

"GN4-3N is a large-scale and demanding project, and its success depends on many factors, in particular being able to rely on committed suppliers with a can-do attitude and a range of solutions. In challenging times, EXA Infrastructure has consistently delivered for us."

Bram Peeters, Chief Network Operations Officer at GÉANT

AT THE HEART OF GLOBAL RESEARCH AND EDUCATION NETWORKING



carried an average of 7PB (Petabytes) of data every day.

GÉANT has been relying on EXA Infrastructure for part of its network since 2012 and has recently consolidated its trust in EXA Infrastructure to upgrade its European network capacity via the GN4-3N project, as well as the US, via transatlantic subsea connectivity .



understanding the virus and discovering a vaccine to fight it. Sharing knowledge, results and data is fundamental to this and high-speed, reliable, secure connectivity services are crucial to support science. To meet this and similar challenges, GÉANT needs to rely on high quality fibre to support its core backbone DWDM deployment, as well as colocation services. It also needs diversified routing for service assurance to customers.

The challenge

Science today is data-driven, meaning that not only do research projects and experiments generate massive amounts of information, but the scientific discoveries that impact and improve our lives come from that data, thanks to compute-intensive analysis by teams spread across countries and continents. The challenge for GÉANT and its National Research and Education Network (NREN)

partners is to seamlessly connect those teams via some of the fastest data networks and most trusted identity services currently available to mankind.

The Covid pandemic outbreak represents a clear example of how much flexibility and reliability is needed in today's networking environments. Thousands of researchers in hundreds of institutions across the world have been sharing their knowledge and resources on

The solution

EXA Infrastructure's extensive terrestrial and subsea fiber networks provide connectivity that underpins massive and demanding research and education infrastructure, such as GÉANT's. These networks demand extreme bandwidth, non-stop availability and continuous infrastructure investment that EXA Infrastructure is committed to maintain.

For these reasons, and the expertise of our teams in understanding the specific customer technical and commercial needs, EXA Infrastructure has been able to provide GÉANT with creative solutions for its dark fibre, colocation, wavelength and optical spectrum requirements.

EXA Infrastructure has successfully delivered more than 7,700 kilometres of dark fibre services to GÉANT, including two subsea dark fibre links connecting the UK to Europe, plus 100G transatlantic wavelength connectivity.

With more than 500 Points of Presence (PoPs) on six continents, covering 32 countries, the EXA Infrastructure network and integrated Edge Datacentres have helped GÉANT to support its NREN partners, increasing resiliency via multiple diversified routes.

The result

Working with EXA Infrastructure, GÉANT has successfully met its challenge to serve its customers better and more efficiently. EXA Infrastructure has the necessary scale, expertise and commitment to be a trusted supplier, providing a flexible, reliable and scalable infrastructure. With all GÉANT network acquisition being subject to a stringent procurement and tendering process, GÉANT has been able to ensure it acquires the best fibre technology on the best commercial and contractual terms.

Jeff Beer, EXA Infrastructure CRO, commented: "we are thrilled that our relationship with GEANT has gone from strength to strength over the past 10 years, and that we have been able to contribute so much to the success of the GÉANT network. We look forward to supporting the growth of GEANT, and the European research and education community, for many years to come."

"EXA Infrastructure has been absolutely key in the delivery of the GN4-3N project to date, delivering nearly 8,000km of dark fibre routes either on time or early, and with excellent support from the EXA Infrastructure Service Delivery Team. That commitment to the success of our project, together with regularly going the extra mile for us and ensuring the highest quality of support and documentation, is contributing greatly to the success of GN4-3N."

Paul Shelswell, GN4-3N Project Manager at GÉANT

What is EXA Infrastructure?

Headquartered in London, EXA Infrastructure is a portfolio company of I Squared Capital and the largest dedicated digital infrastructure platform connecting Europe and North America and owns 151,000 kilometres of fibre network across 34 countries. EXA's network connects 300 cities and offers 13 Tier 3-equivalent data centres, with sub-sea routes that include six transatlantic cables, and the lowest latency link between Europe and North America.



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