The appropriately named ~okeanos service is an ambitious Infrastructure as a Service (IaaS) rolled out by GRNET, Greece’s NREN in 2011. Okeanos is the Greek word for ocean – a symbol of abundance. Oceans are a force that transforms our world by storing and delivering energy, oxygen and life to our planet – an unfailing well of resources.

~okeanos delivers production-quality IaaS to the Greek Academic and Research Community so that students, professors, and researchers can dive into the ‘ocean’ for free and get the full power of virtual infrastructures in computing, networking and storage – easily and cost effectively. The service is run from their own data centres, over their own dark fibre network.

What this means is that users can "build" their own computer, always connected to the Internet, without worrying about hardware failures, spaghetti cables, connectivity hiccups and software troubles. Users can manage, destroy, connect and do almost anything they like to the virtual machines and network all from inside their favourite web browser. They can also store your files online, share them and access them anytime, from anywhere in the world.

The spirit of making computing and access as easy as possible, GRNET offers federated login using Shibboleth. This has enabled GRNET to offer ~okeanos-global (https://okeanos-global.grnet.gr), an ~okeanos installation available through eduGAIN. Greek ~okeanos users have always been able to use the same credentials they use to login to university or research centre accounts; eduGAIN users can also get a taste of ~okeanos by using their home credentials to login to ~okeanos-global.

When the developers of ~okeanos expanded their reach to offer the services to the global R&E community, having eduGAIN in place and working helped them gain visibility for the service throughout the world. According to Panos Louridas, project manager for GRNET's cloud initiatives, this "soft power" approach has paid off. "We know a great deal of people have used ~okeanos-global, and so through that they have become more familiar with our services. Today, we have users all over the world adopting ~okeanos. We believe that this growth comes from spreading knowledge by word-of-mouth, so the investment in the eduGAIN infrastructure has paid off."

Based on this success, GRNET is considering integrating more "GRNET-grown" services via eduGAIN. "For quite a while, we have been operating a production quality e-polling and survey system called Zeus. The next step is to make it available throughout GÉANT so that people can carry out fully anonymised, verifiable surveys and polls, rather than relying on Doodle or proprietary systems."

eduGAIN is leading the way for more intuitive, simpler access and increased service adoption throughout the GÉANT network. Every day over 40 federations across the globe participate in, or are in the process of joining eduGAIN, with approximately 1,500 identity providers and 1000 service providers. eduGAIN is helping them to leverage the power of online services that are crucial to research and education.