



COVID-19: NREN Impact & Responses

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www.geant.org



Impact of COVID-19 on NRENs



3 August 2020

D3.9 GÉANT Support for R&E during the Early Stages of the COVID-19 Pandemic

This document summarises the work GÉANT and its European and global partner networks have been doing to support research and education during the early stages of the COVID-19 pandemic, with particular focus on activities being supported by the EC.

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- Information collated from bilateral feedback, NREN websites and announcements/ blog posts https://www.geant.org/Projects/GEANT_Project_GN4-3/GN43_deliverables/D3-9_GEANT-Support-for-RandE-during-the-Early-Stages-of-the-COVID-19-Pandemic_Version-1-2.pdf

NREN activities are mainly affected in the following areas:

- Business continuity
- Network
- Services
- Community



The Human Impact





The Human Impact



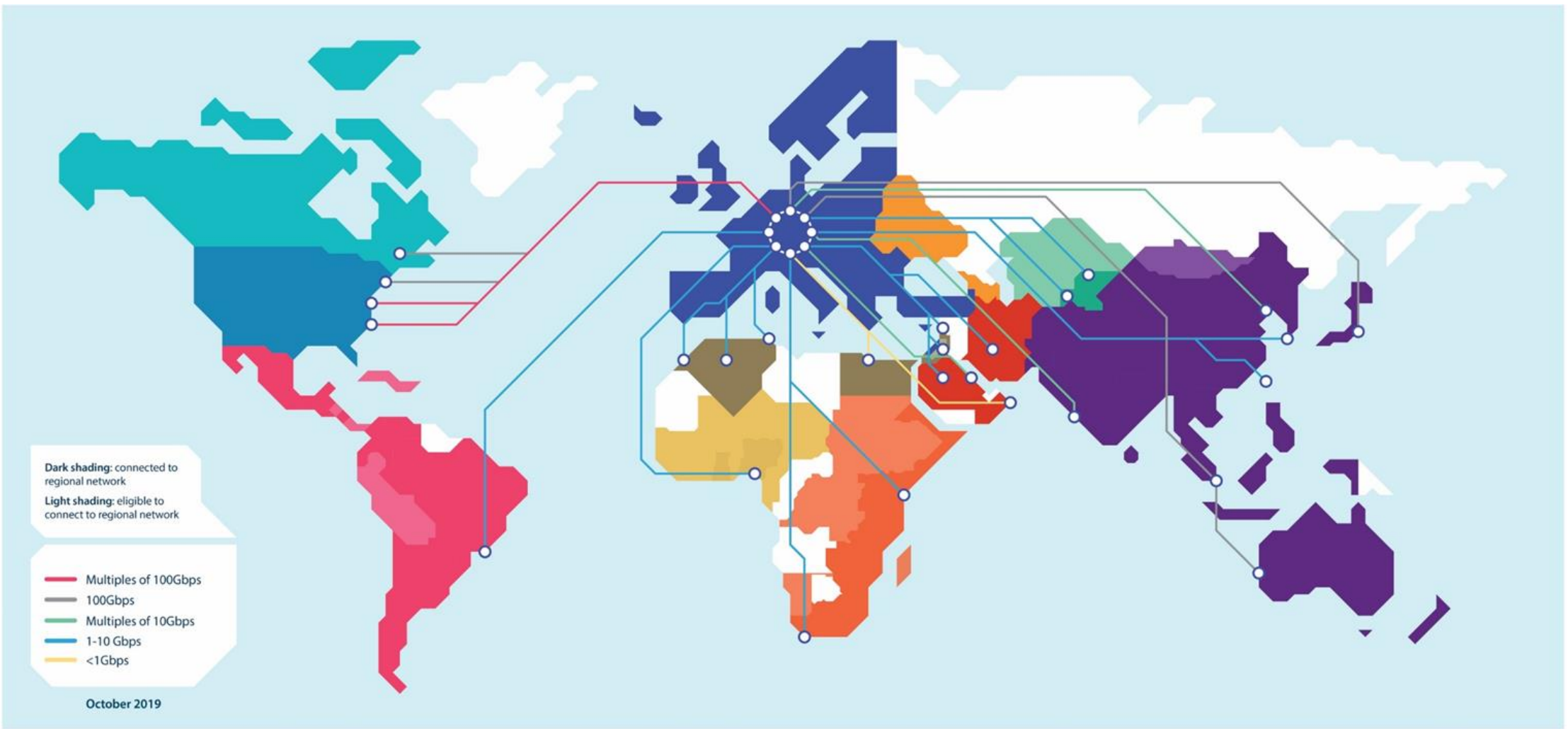
CONNECT Interview: Erik Huizer – Let's talk about managing in a pandemic

8 months ago



GEANT CEO Erik Huizer and Vidya Ambadipudi, software developer at GEANT on a Walk and Talk

<https://connect.geant.org/2021/03/26/connect-interview-erik-huizer-lets-talk-about-managing-in-a-pandemic>

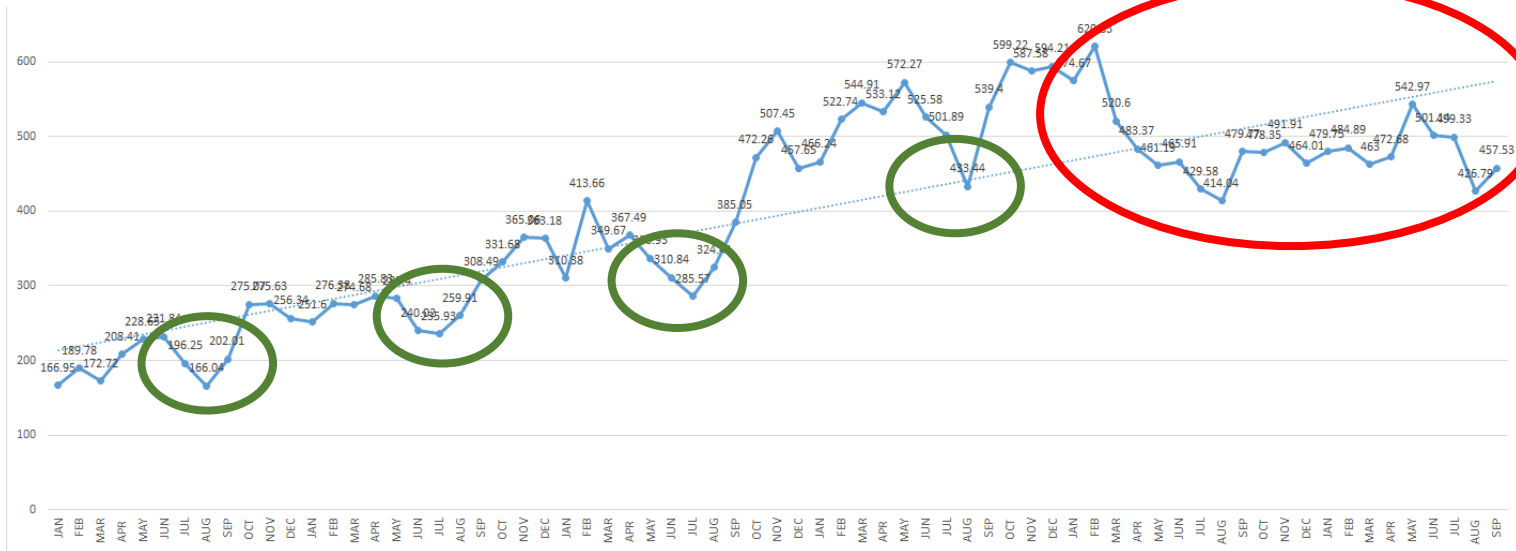


Canada & USA Latin America Europe North Africa & Eastern Mediterranean West & Central Africa Eastern & Southern Africa Central Asia Asia-Pacific Other R&E Networks



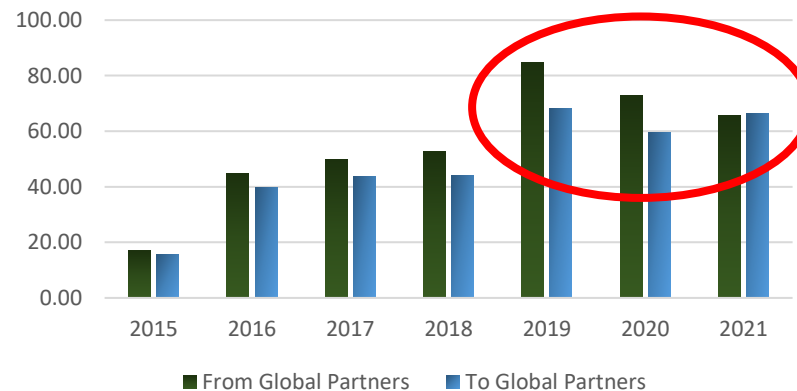


GÉANT Traffic Impact



GÉANT Backbone aggregate Average traffic (Gbps)
Jan 2016 to Sep 2021

Average Monthly Global R&E Traffic 2015-2021



GÉANT Global Traffic, monthly average (Gbps)
Jan 2015 to Aug 2021



Key findings: Business Continuity & Network

“We all stay online and communicate with each other as usually - just not f2f but via eduMEET, Skype and phones instead.”

Business continuity:

- Face-to-face meetings cancelled and moved to VC
- Most work NRENs do can be done remotely
- Almost by design NRENs are well suited to allow remote working

“All events that imply physical gatherings have been either cancelled or moved to Videoconference”

“We are quite well prepared to work remotely (everyone has a laptop, company mobile phone, VPN for secure remote access, and security and collaborative tools)”

“Our network has multiple resilient connections to the General Internet and there is sufficient capacity to cope with a shift to remote working and teaching.”

Network:

- Network infrastructure generally meets challenges posed by the lockdown – some minor upgrades
- Work needing physical presence postponed – also don't any disturbances
- Later, local NREN staff supported some on-site work.

“Everything is fine and we can increase capacity if needed.”

“The entire design of the ...network is to be over-engineered ... (it) is built to handle sudden and unexpected traffic peaks. Exactly the kind of peaks that can happen in the midst of a global pandemic.”



Improving Connectivity Access



Increasing NREN capacity to commodity internet

Promoting mobile connection zero-rating for educational sites among mobile operators

Increasing eduroam hotspots



Negotiations with telcos for affordable bundles for students / academics



e-voting



Brazil's Connected Students Programme

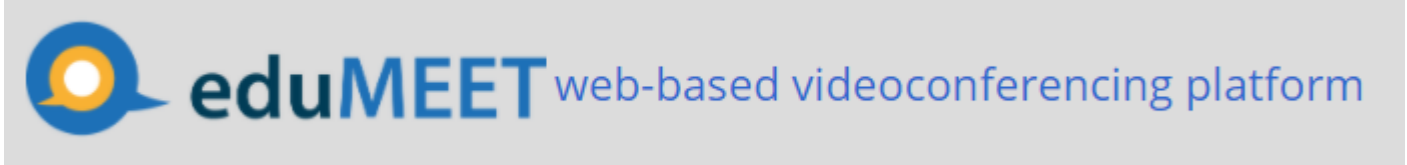


“We live in a very poor region. In this moment of pandemic, when we cannot be in person at the institution, this chips came to minimise our difficulties. The internet is really good! We manage to keep our activities up to date and satisfy our needs as students.”

Daiane Brabo



Enabling Interaction and Learning



openUp2U

Lockdown, not shutdown: our Next Generation Digital Learning Environment is open for all European educational institutions!



Commercial videoconferencing solutions

Media and video platforms
Educational content

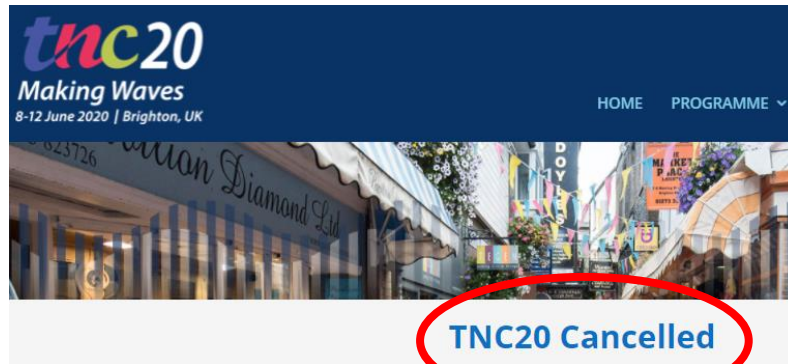
Access to Literature
Moocs





Events

- Activities Cancelled or Online Only



- Will hybrid events become standard, beyond the pandemic?





Facing the World's Challenges...



Source: <https://www.copernicus.eu/>; Sentinel-3

- RENs have a crucial role to play in supporting research and the development of solutions to the world's challenges
- We need sustainable NRENs:
 - Stakeholders (governments, institutions need to understand our role and value)
- We need to think and act as a community:
 - Collaborate on and share services to maximise use of resources
 - Extend access via trust and identity services
 - Support and promote open science
- Be optimistic
 - In this pandemic we have shown our relevance and value, as well as the ability to respond.

Thank you!

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