

**UbuntuNet-Connect 2020**

# **Report of Contributions**

Contribution ID: 1

Type: **not specified**

## **Off-campus eduroam to support secure remote learning: The case for RENU during the COVID-19 pandemic**

*Wednesday 18 November 2020 12:00 (20 minutes)*

eduroam (education roaming) is a world-wide trusted and secure Wi-Fi network for researchers, students and staff of education and research institutions. Before the COVID-19 pandemic, globally, most NRENs typically deployed eduroam only in the networks of their member institutions, whereby users could only access eduroam when they visited any campus that had deployed eduroam. However, that setup does not enable users to continue utilizing this service while away from campus, and this challenge came to the fore at the height of the COVID-19 pandemic when all education institutions were closed and students and staff requested to work and study off-campus. In this paper, we describe how RENU extended its eduroam Wi-Fi connectivity to public areas in the Greater Kampala Metropolitan Area (GKMA), in a bid to extend free and secure connectivity to students and staff, to support education and research activities off-campus. The paper brings out; the deployment architectures used by various infrastructure owners and service providers, the problems and challenges faced during and after the deployment of the service, the benefits of the rollout, and the observations in traffic patterns and authentication requests. The future plans are also discussed.

**Presenter:** HNAKAWUNGU KABUUBI, Hellen (RENU)

**Session Classification:** Subtheme 1: Off-campus Connectivity and Innovation

Contribution ID: 2

Type: **not specified**

## **NKN: Key enabler for creating a paradigm shift for knowledge sharing during COVID**

*Wednesday 18 November 2020 12:20 (20 minutes)*

**Presenter:** KHANNA, seema

**Session Classification:** Subtheme 1: Off-campus Connectivity and Innovation

Contribution ID: 3

Type: **not specified**

## Supporting Resilient Off-Campus Access in a Disrupted Environment

*Wednesday 18 November 2020 12:40 (20 minutes)*

Teaching Research has largely been based on on-campus models where researchers, faculty and students have traditionally conducted their core business primarily from within their home institutions with remote or off-campus access only initiated whenever there is collaboration with other institutions.

The COVID-19 pandemic resulted to closure of all educational institutions in Kenya from March 2020

when most educational institutions were still continuing with the semesters. This prompted rapid search for and implementation of solutions to support teaching, learning and research from remote locations. These solutions ranged from learning management systems, conferencing systems, end user devices, off-campus connectivity, and access just to mention but a few.

To support its member institutions, KENET engaged in different initiatives aimed at facilitating the

transition to support online remote teaching, learning and research. Some of the solutions implemented to support the KENET community included off-campus 4G/LTE access through Private

Mobile Network APN, Affordable Mobile Bundles for students, secure access through eduVPN and providing conferencing facilities for meetings and teaching in the period. This presentation will focus

on some of the solutions and innovations implemented by KENET to support its community with learning and research continuity during the disruption.

**Presenter:** ASEDA, KENNEDY (KENYA EDUCATION NETWORK)

**Session Classification:** Subtheme 1: Off-campus Connectivity and Innovation

Contribution ID: 4

Type: **not specified**

## **Advances in Collaboration in R&E Networking between Africa, Latin America and the U.S.**

*Wednesday 18 November 2020 13:00 (20 minutes)*

**Presenter:** MORGAN, Heidi (USC-ISI)

**Session Classification:** Subtheme 1: Off-campus Connectivity and Innovation

Contribution ID: 5

Type: **not specified**

## eduVPN and how to deal securely with generalised remote working

*Wednesday 18 November 2020 13:20 (20 minutes)*

eduVPN is a VPN solution targeting the research and education community. The purpose of the solution is to provide secure access both to private institutional networks as well as public networks. eduVPN is one of the very few fully free software solution for VPN, both on server and client server sides. Different client apps have been created for Windows, Linux, macOS, Android and iOS; the code is regularly audited by external experts.

eduVPN has already been functional for a few years and it has grown rapidly: it started as a project in SURF - the Dutch National Research and Education Network (NREN) - and it is now offered by 14 National Research and Education Networks (NRENs) A few private companies outside the field of research and education also use the software.

However, apart from the Netherlands, where eduVPN is offered centrally as a managed service to many universities, the institutional access deployments remained limited in most countries. Two main factors explained the limited diffusion of eduVPN as a corporate VPN solution: 1. the needs of institutions were already served by commercial solutions with a typical duration of 3 years, 2. Despite the high costs of commercial solution, it appeared risky for many IT departments of institutions to switch to a solution which was not yet adopted by a large number of institutions.

COVID19 changed this situation. As people were sent home, the need for secure VPN access to private resources changed scale. Whereas it was typical for a middle-sized university to have hardware and licenses to serve up to 500 or 1000 concurrent users, IT departments suddenly had to look at new solutions. Very quickly, with the support of their NRENs, a high number of universities in Europe but also on other continents deployed eduVPN instances. In Africa, RENU supported for example different institutions in Uganda in order to enable them to use eduVPN. Other deployments took place in Kenya, Morocco and in South Africa.

**Presenter:** COULOUARN, Tangui (DeiC)

**Session Classification:** Subtheme 1: Off-campus Connectivity and Innovation

Contribution ID: 6

Type: **not specified**

## **The NEA3R Collaboration: Expanding Support for Global Science**

*Thursday 19 November 2020 07:00 (20 minutes)*

**Presenter:** MOYNIHAN, Edward (Indiana University)

**Session Classification:** Subtheme 2: Policy, Governance (digital transformation) and Partnerships

Contribution ID: 7

Type: **not specified**

## **The Impact of COVID-19 on STEM and Practical-oriented Degree Programmes in Higher Education: Challenges and Solutions**

*Thursday 19 November 2020 07:20 (20 minutes)*

**Presenter:** THUSABANTU, Nyasha (Harare Institute of Technology)

**Session Classification:** Subtheme 2: Policy, Governance (digital transformation) and Partnerships



Contribution ID: 8

Type: **not specified**

## **PRIDA: An AU-EU-ITU project fostering universally accessible and affordable broadband across the African continent**

*Thursday 19 November 2020 07:40 (20 minutes)*

**Presenter:** RODRIGUEZ, Oscar (ITU)

**Session Classification:** Subtheme 2: Policy, Governance (digital transformation) and Partnerships

Contribution ID: 9

Type: **not specified**

## Commercial Cloud and other consumable Digital Services

*Thursday 19 November 2020 08:00 (20 minutes)*

Research indicates that the global R&E community is already heavily dependent on the consumption of commercial cloud services and other related digital services providing for platform and software solutions in support of teaching, learning and research activities. The NREN is already providing bandwidth in support of this consumption, but what is our role in further supporting our community's access to commercial IaaS, PaaS and SaaS solutions?

This presentation will explore strategy –and current initiatives focused on these services, particularly in the EMEA region. We will look at the workloads and activities most disrupted by these trends, and opportunities to better support these within the UbuntuNet context. Covid-19 provided a serious disruption to the way people communicate and work. Teaching and learning activities were amongst those most disrupted and schools scrambled to get their classrooms online. Distance learning has been topical for some time but became an imperative during this time. From this point on it will be important to provide for a hybrid platform for teaching. We will review a few related case studies.

On-premise vs community vs commercial cloud –we will discuss the pros and cons regarding both building bespoke local/regional platforms and procuring commercial commodity compute and storage solutions by means of NREN enabled procurement frameworks.

**Presenter:** HEYNS, David (GÉANT)

**Session Classification:** Subtheme 2: Policy, Governance (digital transformation) and Partnerships

Contribution ID: 10

Type: **not specified**

## AfricaConnect3: Connecting Africa to Unlimited Possibilities

*Thursday 19 November 2020 08:20 (20 minutes)*

Since 2011, the European Union has been co-funding the development of pan-African Research and

Education Network (REN) through the AfricaConnect project. The third phase of AfricaConnect (AC3) started in November 2019 with GÉANT, ASREN, UbuntuNet Alliance, and WACREN regional RENs 1 as the main coordinators. The main objective of AC3 is to contribute to the human capital development of Africa by increasing the use of digital technologies at the African research and education institutions. Without high-speed network infrastructures for research and education,

however, access to digital technologies remains a challenge.

African researchers and students have not been active contributors and users of world research and

innovation. This is due to the absence of affordable connectivity and lack of services. According to

UNESCO's statistics, Africa contributes to less than 2% of the world's research output and has only

91 researchers per million people compared to 4272 for North America and Western Europe 2 . In general, Internet penetration in Africa is very low due to lack of connectivity and highly priced Internet.

AC3 presents a great promise not only for establishing high-speed networks to interconnect universities, colleges and research centers across Africa, but also for deploying a wide range of services that allow instructors, scientists and students to seamlessly access a wealth of invaluable education and research resources. These include cloud technologies, high performance computing, digital repositories, online libraries, and ODeL (Open and Distance eLearning) as a means for disruptive access to higher education.

In this talk, AC3 will be presented as a new prospect for connecting Africa to unlimited possibilities

in education, research, and innovation. The project is centered on 4 main actions. The first action focuses on establishing secure, adequate and affordable network infrastructures for the African NRENs interlinking them through their respective African RENs to GÉANT, Internet2, RedCLARA and other regional RENs. The second action supports the deployment of dedicated services and applications that provide seamless access to variety of computational resources and repositories in an

effort to foster collaboration. Efforts will include setting up eduID.Africa, deploying eduroam and eduGAIN, and initiating the African open science cloud. The third action will implement a large-scale capacity building program through the Africa Training Initiative. Finally, the fourth action will

be centered on advocacy and awareness in order to facilitate policy support and stakeholder engagement for the long-term development of sustainable and affordable high-speed network infrastructures.

**Presenter:** ALAGTASH, Salem (ASREN)

**Session Classification:** Subtheme 2: Policy, Governance (digital transformation) and Partnerships

Contribution ID: 11

Type: **not specified**

## **Moodle for e-learning: A Case Study of the Zambia Research and Education Network**

*Thursday 19 November 2020 12:00 (20 minutes)*

**Presenter:** MKANDAWIRE, Stein (ZAMREN)

**Session Classification:** Subtheme 3: Tools and Services

Contribution ID: 12

Type: **not specified**

## **eduID.africa - Identity and Access Management as an enabler for digital migration in research and education**

*Thursday 19 November 2020 12:20 (20 minutes)*

**Presenter:** OAIYA, Omo (WACREN)

**Session Classification:** Subtheme 3: Tools and Services

Contribution ID: 13

Type: **not specified**

## Open-Source-Based Communication-System for R&E Community. The Case for SomaliREN VC.

*Thursday 19 November 2020 12:40 (20 minutes)*

Educational institutions - schools and universities in Somalia are based only on traditional learning; they follow the conventional face-to-face classroom lectures. The sudden outbreak of a pandemic called COVID-19 caused by a Corona Virus shook the entire world. To help contain the pandemic, the ministry of Education, Culture, and Higher Education(MOECHE) of Somalia ordered the closure of schools and universities to help control the virus as social distancing is the best way to prevent COVID-19 and overcrowded classrooms pose a challenge for distancing.

SomaliRENS' member institutions, most of which are privately run, faced an economic crisis following the country's suspension of teaching and learning. They rely on students' tuition to sustain their institutions. To ensure continuity of operations and avoid a significant disruption, SomaliREN provided relief to its member institutions by offering its customized video conferencing platform, which universities are now using for remote teaching and learning. This is a free open-source-based research and education communication-system using BigBlueButton, specially designed for academic institutions with comparable features and quality to commercial ones such as Zoom and Cisco Webex.

Keywords: VideoConferencing Platform, BigBlueButton, R&E Community.

**Presenter:** AHMED, Mohamed Ali (SomaliREN)

**Session Classification:** Subtheme 3: Tools and Services

Contribution ID: 14

Type: **not specified**

## **InAcademia and eduGAIN: new Trust & Identity services in GÉANT**

*Thursday 19 November 2020 13:00 (20 minutes)*

**Presenter:** WIERENGA, Klaas (GÉANT)

**Session Classification:** Subtheme 3: Tools and Services



Contribution ID: 15

Type: **not specified**

## **The LIBSENSE Research Agenda - Reporting on Past Activities and Plans for AC3**

*Thursday 19 November 2020 13:20 (20 minutes)*

**Presenter:** ABBOTT, Pamela (The University of Sheffield)

**Session Classification:** Subtheme 3: Tools and Services

Contribution ID: 16

Type: **not specified**

## **The Dragon has Destroyed the Data Center**

*Friday 20 November 2020 07:00 (20 minutes)*

**Presenter:** NISBET, Brian (HEAnet)

**Session Classification:** Subtheme 4: Best practices in e-Learning and Remote Working

Contribution ID: 17

Type: **not specified**

## **e-learning and student engagement at Universities in the digital era**

*Friday 20 November 2020 07:20 (20 minutes)*

**Presenter:** KANGABE, Rebecca

**Session Classification:** Subtheme 4: Best practices in e-Learning and Remote Working

Contribution ID: 18

Type: **not specified**

## **Reflection on remote working and E-learning practice beyond COVID-19: Experiences from Makerere University**

*Friday 20 November 2020 07:40 (20 minutes)*

**Presenter:** WALIMBWA, Michael (Makerere University)

**Session Classification:** Subtheme 4: Best practices in e-Learning and Remote Working

Contribution ID: 19

Type: **not specified**

## **Implementing Open Access Multi-Institutional Digital Repository - The Case for SORER/SomaliREN)**

*Friday 20 November 2020 08:00 (20 minutes)*

**Presenter:** SIYAD, Ahmed (SomaliREN)

**Session Classification:** Subtheme 4: Best practices in e-Learning and Remote Working

Contribution ID: 20

Type: **not specified**

## **Closing Keynote: Supporting Africa's Digital Transformation: The Role of Universities and NRENs**

*Friday 20 November 2020 12:00 (20 minutes)*

**Presenter:** Dr BASHIR, Sajitha (World Bank)

**Session Classification:** Closing Session

Contribution ID: 21

Type: **not specified**

## **Women in STEM: To see a world in a grain of sand - Experiences of a woman in STEM**

*Friday 20 November 2020 12:20 (15 minutes)*

**Presenter:** HARDING, Ann (SWITCH)

**Session Classification:** Closing Session

Contribution ID: 22

Type: **not specified**

## **UbuntuNet Alliance Community Awards**

**Session Classification:** Closing Session



Contribution ID: 23

Type: **not specified**

## **Closing Remarks from UbuntuNet Alliance CEO**

*Friday 20 November 2020 13:10 (10 minutes)*

**Presenter:** Dr MTUMBUKA, Matthews

**Session Classification:** Closing Session

Contribution ID: 24

Type: **not specified**

## Introduction and Welcome Remarks

*Wednesday 18 November 2020 07:00 (10 minutes)*

**Presenter:** NDEBVU, Hastings (UbuntuNet Alliance)

**Session Classification:** Opening Session

Contribution ID: 25

Type: **not specified**

## **Welcome Remarks by UbuntuNet Alliance CEO**

*Wednesday 18 November 2020 07:10 (10 minutes)*

**Session Classification:** Opening Session

Contribution ID: 26

Type: **not specified**

## **Welcome Remarks by UbuntuNet Alliance Chairperson**

*Wednesday 18 November 2020 07:20 (10 minutes)*

**Presenter:** Prof. SIMUKANGA, Stephen (Chairperson, ubuntuNet Alliance)

**Session Classification:** Opening Session

Contribution ID: 27

Type: **not specified**

## Goodwill Messages

*Wednesday 18 November 2020 07:40 (10 minutes)*

**Session Classification:** Opening Session

Contribution ID: 28

Type: **not specified**

## **Covid-19 and NRENs: Counting the Cost**

*Wednesday 18 November 2020 07:50 (20 minutes)*

**Presenter:** GREAVES, Duncan (TENET)

**Session Classification:** Opening Session

Contribution ID: 29

Type: **not specified**

## Opening Keynote Speech

*Wednesday 18 November 2020 08:10 (30 minutes)*

**Session Classification:** Opening Session

Contribution ID: 30

Type: **not specified**

## **Plenary Discussion on Positioning Research and Education**

*Wednesday 18 November 2020 08:40 (20 minutes)*

**Presenter:** Mr BANDA, Tiwonge (UbuntuNet Alliance)

**Session Classification:** Opening Session



Contribution ID: **31**

Type: **not specified**

## Session Closing

**Presenter:** NDEBVU, Hastings (UbuntuNet Alliance)

**Session Classification:** Opening Session

Contribution ID: 32

Type: **not specified**

## Massive Online Education in Croatia 2020

*Friday 20 November 2020 08:20 (20 minutes)*

In an attempt to control the spread of COVID-19 pandemic in March 2020 the Government of Croatia decided to close all educational institutions in the country and transfer all teaching and learning online. This was a big challenge for organisations and individuals as there was very little time left for the preparation of such transition or for ensuring that everybody involved had access to the necessary infrastructure. In order to document this transfer of the whole education system to online environment CARNET initiated the research focusing on the use of digital technology, particularly in primary and secondary education. While qualitative part of the research involved only a handful of educators who kept reflective journals of their practice during online schooling, nearly 27000 participants responded to the surveys that followed. They reported on challenges with infrastructure, time management, organisation of virtual classrooms, structure of digital materials, student-teacher online communication and other aspects of online schooling. The presentation will briefly report on research results.

**Presenter:** Mrs TINGLE, Jasna (Croatian Academic and Research Network - CARNET)

**Session Classification:** Subtheme 4: Best practices in e-Learning and Remote Working

Contribution ID: 33

Type: **not specified**

## Online Student Support in Croatia

*Thursday 19 November 2020 13:40 (20 minutes)*

This presentation will show how CARNET arranged VLE and infrastructure for conducting online essay in Moodle simultaneously for more than 13.000 secondary school students during the COVID-19 pandemic. CARNET provided technical support for the online essay, which was a part of a trial graduation exit exam. The goal was to test system capability and adequacy of particular Moodle tools for the exam such as quiz and assignment. It will be presented how the system was set up and how activities were adjusted for various user groups, including those with learning disabilities. The results show that the majority of participants successfully submitted the essay via Moodle platform, which proved that Moodle is adequate as a platform for the online graduation exit exam for secondary school students simultaneously writing the exam.

**Presenter:** REŽIĆ, Marin (CARNET)

**Session Classification:** Subtheme 3: Tools and Services

Contribution ID: 34

Type: **not specified**

## Remarks from EU DG DEVCO

*Wednesday 18 November 2020 07:30 (10 minutes)*

**Presenter:** Mr DI STEFANO, Fabio (European Commission –DG DEVCO)

**Session Classification:** Opening Session

Contribution ID: 35

Type: **not specified**

## Feedback From NREN User

*Thursday 19 November 2020 08:40 (20 minutes)*

As a heavy user of communication networks, Sorbonne University provides feedback on why NRENs matters and how its IT department has managed lockdowns.

After a little background on Sorbonne University and research and education networks in Europe, a review of the successes and failures of the first lockdown in March 2020 and the lessons learned to address the current one.

**Presenter:** MOUTTE , Fabrice

**Session Classification:** Subtheme 2: Policy, Governance (digital transformation) and Partnerships

Contribution ID: 36

Type: **not specified**

## **Women in STEM: My journey, my story**

*Friday 20 November 2020 12:35 (15 minutes)*

**Presenter:** Dr MUSHI, Magreth (Tanzania Education and Research Network)

**Session Classification:** Closing Session

Contribution ID: 37

Type: **not specified**

## **Closing Remarks from the Chairperson of UbuntuNet Alliance**

*Friday 20 November 2020 13:20 (10 minutes)*

**Presenter:** Prof. SIMUKANGA, Stephen (Chairperson, ubuntuNet Alliance)

**Session Classification:** Closing Session

Contribution ID: **38**

Type: **not specified**

## **Women in STEM: Plenary Discussion**

*Friday 20 November 2020 12:50 (20 minutes)*

**Presenter:** DEKKAR, Leila (GÉANT)

**Session Classification:** Closing Session



Contribution ID: 39

Type: **not specified**

## eSymposia Virtual Meeting Initiative: Democratizing Science

*Friday 20 November 2020 08:40 (20 minutes)*

Keystone Symposia's eSymposia virtual meetings bring together global research leaders and rising stars in a particular field to discuss the latest research advances and directions, while broadcast live to global audiences.

Altogether, eSymposia virtual meetings, and associated resources, help to connect the global research community with the latest biomedical advances, tools and technologies, and even more importantly, with each other, to catalyze and accelerate life science discovery and innovation towards clinical impacts.

These virtual events also democratize the dissemination of science, by eliminating travel and minimizing costs to participate in global research meetings. With these digital technologies we are able to engage global audiences, giving scientists from limited resource settings and remote locations the rare opportunity to present their work and network with global research leaders. Fostering such diversity and inclusion in both virtual and in-person meetings is part of Keystone Symposia's core mission, and eSymposia virtual meetings are a key part of this vision.

**Presenter:** DUA, Nick

**Session Classification:** Subtheme 4: Best practices in e-Learning and Remote Working