



A Presentation on

WACREN SERVICES



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CONNECTIVITY



Connection to the internet to foster research, teaching and learning



What makes our backbone network unique for the R&E community?

- High Bandwidth
- Dedicated
- Reliable
- Secure

CONNECTIVITY

Countries on our network



1. Ghana – GARNET – 10Gb
2. Nigeria – NgREN - 2Gb
3. Benin – RBER – 2 x STM-1
4. Burkina Faso – FasoREN – STM-1
5. Cote d'Ivoire – RITER – 1Gb
6. Togo – TogoRER – 1Gb

CONNECTIVITY



Benefits

1. **Cost sharing** - Buy at less cost, get more speed and bandwidth
2. **Reliable** - designed to minimize downtime and provide robust connectivity.
3. **Quality of Service** - policies to prioritize traffic based on specific R&E needs.
4. **Global Connectivity** – access resources and collaborate with peers worldwide.



IDENTITY & ACCESS MANAGEMENT ●

- WACREN helps NRENs to provide their members with secure access to services, tools and resources across network boundaries in the region and globally.

- ✓ BonafID - institutional
- ✓ WACREN eduID - regional
- ✓ eduID.Africa - continental
- ✓ eduGAIN - global
- ✓ eduroam - global



eduID – eduGAIN

- eduID (educational identifier) - a unique federated identifier or username assigned to individuals within a research or educational institution.
- eduGAIN - global inter-federation service for exchange of authentication and authorization information between identity federations.
- Over 27,000,000 users worldwide
- 4,500+ identity providers, service managers
- Identity differentiates NRENs from ISPs

<https://edugain.org/>



eduroam

- eduroam is a **secure** Wi-Fi authenticator that lets students, lecturers, and researchers from one university use the internet at other universities around the world without creating new accounts.
- eduroam is global - >100 countries
- eduroam is in **17** African countries
- eduroam has >6 billion authentications
- eduroam has >10,000 hotspots

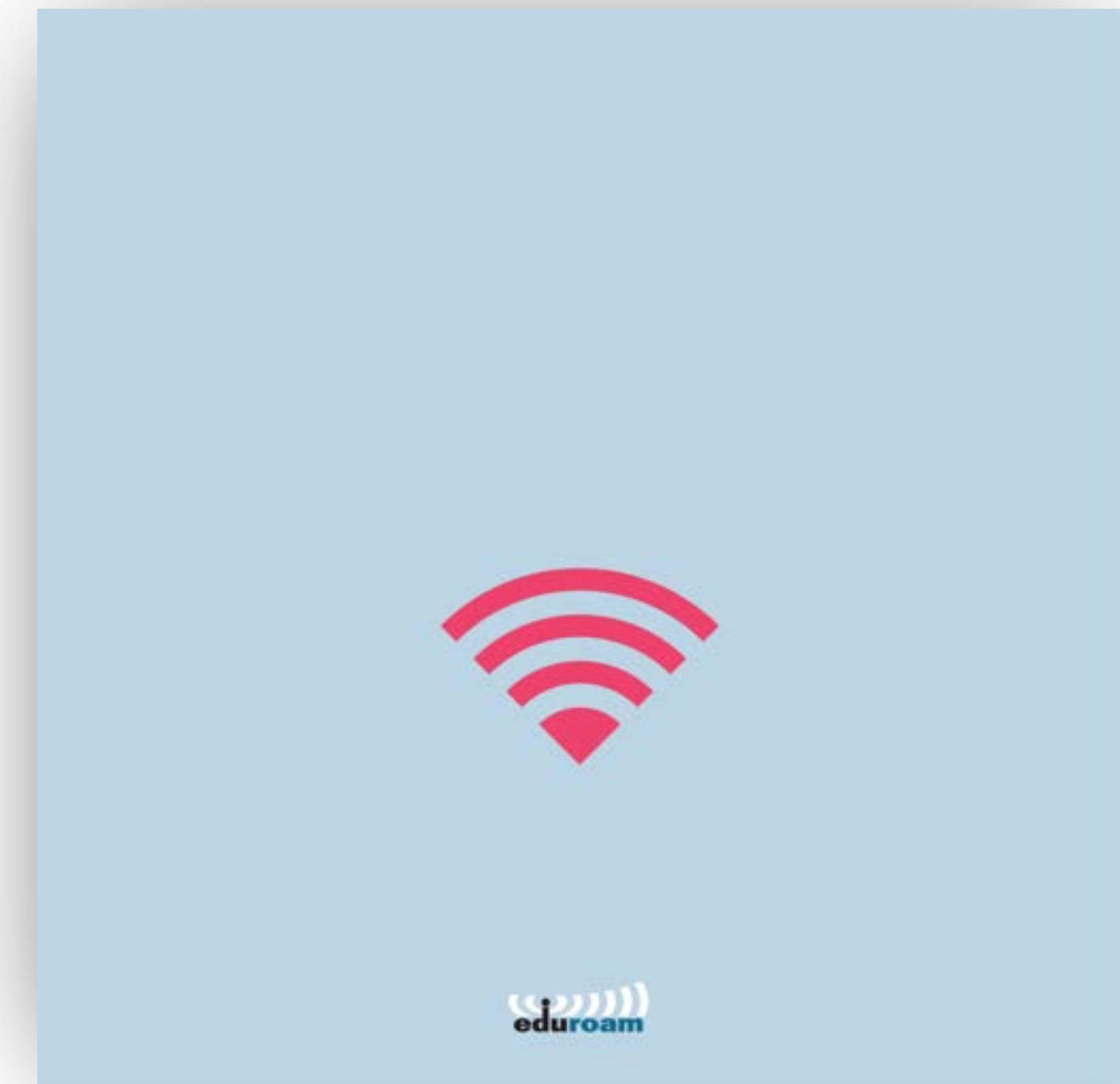
<https://eduroam.org/>



eduroam

Benefits

- For ease of mobility for users
- For seamless academic continuity
- Free of charge for all users
- For institutions, it adds an extra value to your image as a modern institution
- Great service for NRENs to offer to its community



NETWORK PERFORMANCE

- Connected WACREN members are provided with network monitoring and management services.
- Monitors the utilisation of the bandwidth. The data traffic to and from the NREN.
- Provides tools to measure the performance of the circuits – within the network and to other networks - essential for scientific collaborations and data sharing.



NETWORK SECURITY



WACREN deploys modern security and threat detection mechanism for our NRENs:

- Network monitoring on daily basis to collect and analyse logs from NREN network traffic
- Reports – security, threat analysis, traffic pattern - help NRENs to plan against threats
- Capacity building to forestall or address security issues



CYBERSECURITY



- TrustBroker Africa (TBA) extends the WACREN security services with NREN CSIRT cooperation and infrastructure.
- Born as a response to the hikes in cyberattacks against institutions during the pandemic
- Cybersecurity needs **collaboration**, **resource sharing**, and the secure and timely **exchange** of threat intelligence
- The TBA platform allows teams to cooperate to prevent, manage, and coordinate potential cybersecurity-related emergencies.



VIDEO-CONFERENCING

- WACREN provides a video-conferencing service based on Zoom and meeting connectors in the region – better usability.
- >900,000 users in > 30 HEIs in four countries
- Integrated into LMS
- Collaboration tools – Whiteboard, Chats, multiple screensharing, Q&As etc
- Data kept local, on-premise



VIDEO-CONFERENCING

New video solution soon!

- Trialling new video solution built within the REN community
- Cheaper open-source software tailored for R&E
- Focused on digital education and e-Learning
- Users will need just a web-browser, mic and simple webcam
- Pilots to start at Member NREN soon



CLOUD & NOCaaS

- WACREN provides hosting in its datacentres for NREN beneficiaries.
 - DNS, web, authentication servers, research software and databases
- NOC-as-a-Service - continuous monitoring for members who cannot adequately staff their NOC
 - first or second-line support service in collaboration with the NREN engineers
 - NREN remains in charge and staff learn by doing
 - helps to identify issues and offers preventative maintenance.



CAPACITY BUILDING



- Workshops for managers, technical and communication staff
- NREN CEO Academy
- Subject-specific training for communities of practice – librarians, researchers,
- Tailored plan is available and offered on-demand to NRENs depending on their requirements.

<https://indico.wacren.net/category/3/>



Thanks for your time

For more info on WACREN please visit
www.wacren.net

Send enquiries to
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WACREN TV