Connecting West and Central Africa to the Global Research and Education Network

Africa Regional Internet Development Dialogue - Internet Society
Kigali, 8-9 May 2017

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What are, and Why NRENs?

- REN: Research and Education Network
- Closed user groups with specific needs
  - e.g. huge bandwidth requirements during specific periods
- Platform for collaboration and local, regional and global level
- Dedicated to research and education
- Infrastructure either owned or leased from telecom and cable operators
- Different from commodity (commercial) Internet, but use same technologies
  - But RENs generally also provide commodity Internet to their members
- RENs are platforms for innovation with various organisational and funding models
  - Resources from members only, from government only or hybrid funding models
The African REN ecosystem

- **UbuntuNet Alliance** - Incorporated in 2005
  - Regional REN for Eastern and Southern Africa
  - 16 Members

- **ASREN** – Incorporated in 2010
  - Arab States Research and Education Network
  - 6 shareholders, including CNRST (Morocco), SudREN (Sudan), CCK (Tunisia) and EUN (Egypt) and CERIST (Algeria)

- **WACREN** – Incorporated in 2010
  - Regional REN for West and Central Africa
  - 13 Members
WACREN (1)

- Incorporated in 2010 as a not for profit organisation
- Currently 11 NREN members

<table>
<thead>
<tr>
<th>FasoREN – Burkina Faso</th>
<th>Niger-REN – Niger</th>
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<tbody>
<tr>
<td>Cameroon – RIC</td>
<td>NgREN – Nigeria</td>
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<tr>
<td>RITER – Côte d’Ivoire</td>
<td>SLREN – Sierra Leone</td>
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<td>GARNET – Ghana</td>
<td>TchadREN – Tchad</td>
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<td>Gn-REN – Guinée</td>
<td>TogoRER – Togo</td>
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<td>MaliREN – Mali</td>
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- Initiatives: RerBenin (Benin), GabonREN (Gabon), snRER (Senegal)
- Associate members: RENATER (FR), Eko-Konnect (NG)
Proposed WACREN network topology (1)

- Core + Access
  - 10G+ Core
  - 1G+ Access
- 3-4 main hubs: Cameroon, Côte d’Ivoire, Ghana, Nigeria, Senegal
  - Final decision on hubs dependent of variety of connection options, readiness of NREN and cost
- Redundant links from hubs to NRENs
- At least 2 intl. links: to London and Paris or Marseille
- Multiple Submarine Cable Access
- Peering at Open Internet Exchange Points
Proposed WACREN network topology (2)
Current focus: AfricaConnect 2

- Second phase of the AfricaConnect Project
- EC Funding (26.6 M€)
- Project duration: 2015 - 2018
- Objective: Support RENs in Africa and interconnect with GEANT and the global REN
- Three clusters
  - Cluster 1: UbuntuNet Alliance
  - Cluster 2: WACREN
  - Cluster 3: ASREN
- 80:20% funding scheme
AC2 implementation in Cluster 2 (WACREN)

- Project started in June 2015
- Guiding principle: inclusiveness
- 10 countries expected to participate
- Sign-ups so far:
  - TogoRER (TG), MaliREN (ML), RITER (CI), FasoREN (BF)
  - Expected to join soon: NgREN (NG), GARNET (GH)
- Procurement process:
  - Procurement for connectivity started in June 2016
    - Best and final offers for first phase (wet backbone) received
    - Dialogue with operators for terrestrial links ongoing
    - Contract(s) to be signed soon
  - Equipment tender closed
    - Meeting with bidders mid’ May 2017
- Objective: network live in Q3/Q4 2017
Getting W&C Africa in the global REN map...

At the Heart of Global Research and Education Networking

GÉANT and partner networks enabling user collaboration across the globe

October 2016
Contacting WACREN …

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THANK YOU

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