

WACREN EduID and H2020 Projects

Eko-Konnect Seminar on “Federated Identity and Mobility for Research and Education”

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Outline

- The African REN Ecosystem
- WACREN in a nutshell
- Proposed network topology
- Advocacy
- WACREN EduID
- H2020 Projects
- AfricaConnect2

The African REN Ecosystem – UA (1)

- UbuntuNet Alliance incorporated in 2005
- Regional REN for Eastern and Southern Africa
- 15 Members
 - Eba@le – DRC; BERNET – Burundi; EthERNet – Ethiopia
 - KENET – Kenya; iRENALA – Madagascar; MAREN – Malawi
 - MoRENet – Mozambique; Xnet – Namibia; RwEdNet – Rwanda
 - SomaliREN – Somalia; TENET – South Africa; SudREN – Sudan
 - TERNET – Tanzania; RENU – Uganda; ZAMREN – Zambia
- Operational Network
- Connected to the global R&E network via links to GEANT
- Successfully winded up first phase of AfricaConnect (EC funding) and preparing second phase

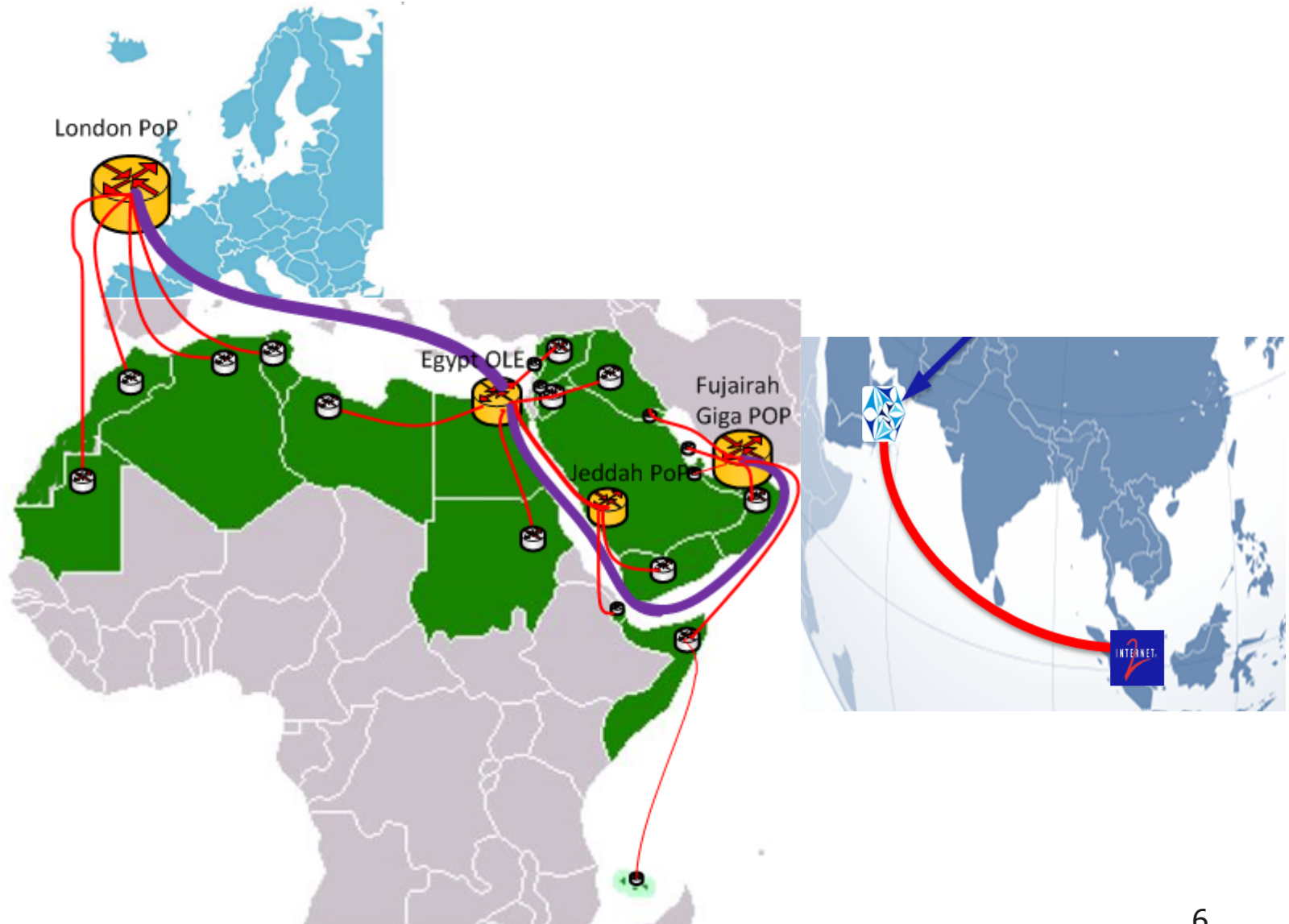
The African REN Ecosystem – UA (2)



The African REN Ecosystem – ASREN (1)

- Established in 2012
- Non profit organization registered in Germany; operates under League of Arab States in Northern Africa and the Middle East
- 6 Shareholders:
 - Abu-Ghazaleh GmbH
 - JUNET (Jordan)
 - EUN (Egypt)
 - CNRST (Morocco)
 - SudREN (Sudan)
 - CCK (Tunis)
- Operational Network
- Connected to the global R&E network via links to GEANT and Internet2

The African REN Ecosystem – ASREN (2)



The African REN Ecosystem – Partners

- AfNOG
- AfriNIC
- AfricaCERT
- International partners

WACREN in a nutshell

- Incorporated in 2010 as a not for profit organisation
- Currently 9 formally established NRENs
 - GARNET – Ghana
 - snRER – Senegal
 - MaliREN – Mali
 - Niger-REN – Niger
 - GabonREN – Gabon
 - NgREN – Nigeria
 - TogoRER – Togo
 - RerBenin – Benin
 - Cameroon – RIC
- Associate members: RENATER (FR), Eko-Konnnect (NG)
- Initiatives in Burkina Faso, Chad, Guinea and Cape Verde

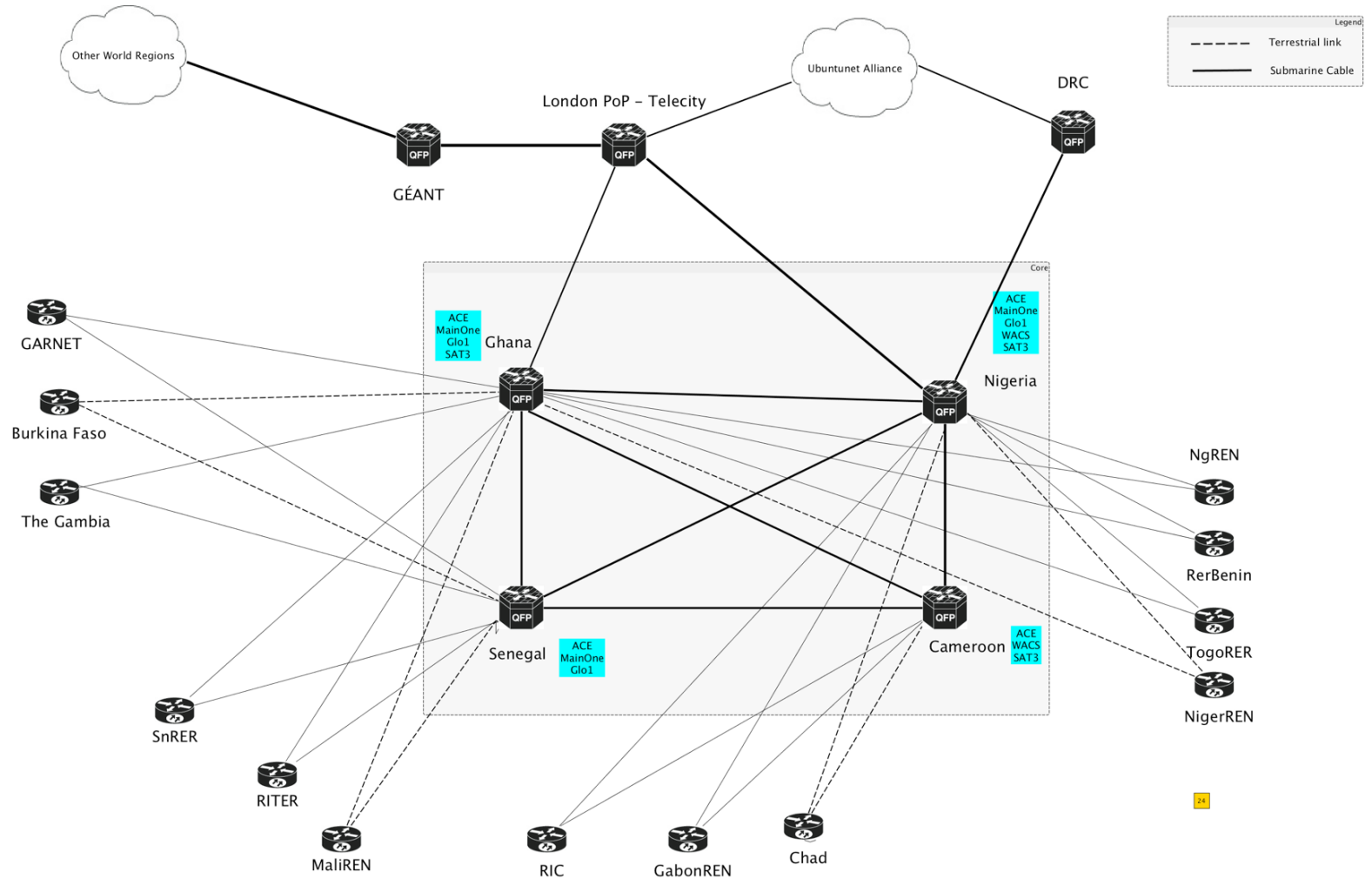
WACREN in a nutshell (cont'd)



Proposed network topology

- Core + Access
 - 10G+ Core
 - 1G+ Access
- 3 main hubs: Accra; Dakar and Lagos (+ Douala/Libreville)
- Redundant links from hubs to NRENs
- At least 2 intl. links: to Paris and London
- Multiple Submarine Cable Access
- Medium term leases

Proposed network topology (cont'd)



Advocacy

- AfricaConnect2 (EC-funded) high on WACREN's agenda
- Several authorities approached for sensitization
 - ECOWAS
 - UEMOA
 - AfDB
 - WATRA (regional association of telecom regulators)
 - Governments
 - Côte d'Ivoire
 - Sénégal
 - Nigeria
 - Niger
 - Togo
- Other issues being addressed with the authorities
 - Legal status of the NRENs
 - Full-time staffing

Federation Basics

- Identity Provider (IdP) - entities (e.g. academic and research institutions, enterprises, etc.) authenticating their users and certifying their identities
- Service Provider (SP) - entities providing services to the federation. They receive individual users' personal data, under consent and provide personalized services
- Federation – Circle of Trust including one or more IdPs and SPs enabling Single Sign On (SSO)

WACREN EduID Objectives

- Bootstrap establishment of NREN federations
- Resolve implementation issues
 - Lack of server infrastructure and issues with electricity
 - Lack of understanding of the technology and knowledge to deploy and maintain
 - Lack of familiarity with identity management systems and managing user databases
 - Limited funding and resources to operate

WACREN EduID Approach

- Policy and Practice
 - Federation policy development workshops
 - Localised templates for federation policy and practice statements

- Technology Support
 - Federation as a Service (FaaS)
 - Register Identity Provider
 - Identity Provider in the Cloud
 - Training on use of WACREN EduID

Metadata Resource Registry

- Centrally hosted Metadata Management
 - Based on software from HEAnet, the Irish NREN
 - WACREN modifying the code to create role for NREN federation administrators
 - Resultant effect = 100% control by NRENs of their federation metadata and entities
- Federation administrators register Identity Providers (IdP) and Service Providers(SP) in their respective federations

<https://eduid.wacren.net/registry>

Browser address bar: <https://eduid.wacren.net/registry/federations/manage>

Navigation tabs: Dashboard, **Federations**, Identity Providers, Service Providers, Register, Administration

Language: EN

CATEGORY: NRENs, Virtual Organisations, **All Federations**

Name	Name in metadata		Description	#
WACREN EduID	urn:mace:wacren.net:eduid	public active local	WACREN Identity Federation	▼
PADTICE	urn:mace:uemoa:unesco:padtice	not public active local	Projet d'appui à la mise en œuvre de la «Licence-Master-Doctorat» la réforme à travers les TIC bâtiment des capacités dans différentes universités des pays en Afrique de l'Ouest.	▼
Eko-Konnect	urn:mace:wacren.net:eduid:ngren:eko-konnect	not public active local	Eko-Konnect is the pioneer cluster of the Nigerian Research and Education Network (NgREN) based in the Lagos area	▼
NgREN EduID	urn:mace:wacren.net:eduid:ngren	public active local	The NgREN Identity Federation - NgREN EduID	▼
eduGAIN	urn:mace:wacren.net:eduid:edugain	not public active local	eduGAIN is the GÉANT interederation service that interconnects identity federations around the world, simplifying access to content, services and resources for the global research and education community. Join this interederation to have your IdP or SP published to eduGAIN interederation. The metadata generated here will have only IdPs and SPs that are published to eduGAIN.	▼

H2020 Projects

- WACREN is Consortium Member in three (3) projects funded in the framework of European Commission Horizon 2020 Programme
- Projects from May 2015 – April 2017
- **TANDEM** (TransAfrican Network Development)
 - Aimed at creating the favourable conditions for WACREN to benefit maximally from AfricaConnect2
 - ensure WACREN integration into the global Research and Education networking community and long-term sustainability
- Ongoing NREN needs survey
- Project site - <http://www.tandem-wacren.eu/>

H2020 Projects (cont'd)

- **Sci-GaIA** (Energising Scientific Endeavour through Science Gateways and e-Infrastructures in Africa)
 - Aimed at producing clearly structured guides and educational documents for training NREN representatives, Communities of Practice (CoPs), and, importantly, to get universities to develop Science Gateways and e-Infrastructures in Africa
 - Participation requires federated access
- Project website - <http://www.sci-gaia.eu/>
- **MAGIC** (Middleware for collaborative Apps and Global vRtual Communities)
 - Aims at establishing a set of agreements for participating world regions – Africa
 - Consolidate middleware for a marketplace of services and real-time applications to benefit global science communities
- Project website - <http://magic-project.eu>

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
- Three clusters
 - Cluster 1: UbuntuNet Alliance
 - Cluster 2: WACREN
 - Cluster 3: ASREN
- 80:20% funding scheme
- Budget for Cluster 2: 12.25 M€ (2.5 M€ counter-funding by WACREN)
- Implementation of Cluster 2 component: GEANT and WACREN

Contacting WACREN ...

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THANK YOU !

AND SEE YOU AT WACREN 2016
IN DAKAR (17 – 18 MARCH 2016)

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