

eduroam implementation: Case study Kenyatta University

By Maureen Wanja Njue

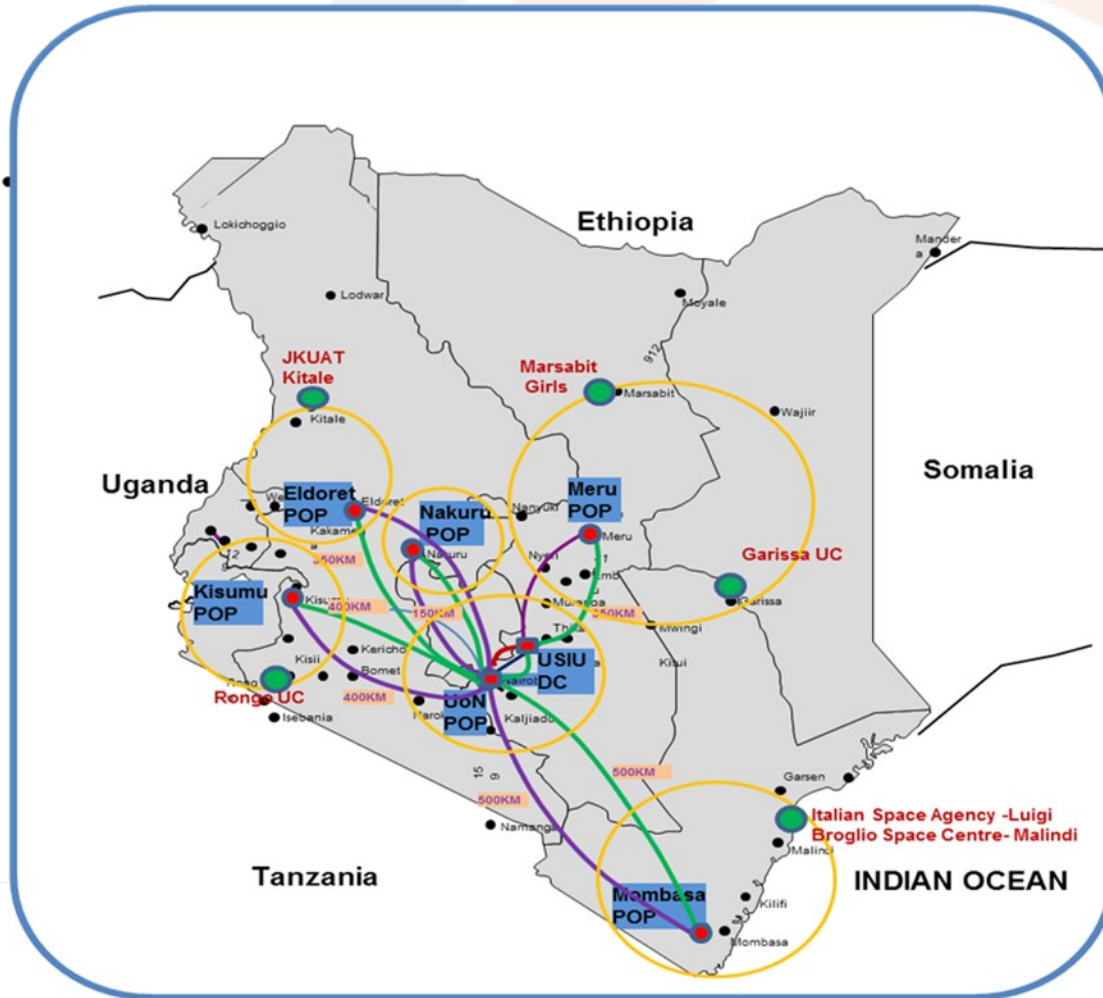
Kenya Education Network (KENET)

mnjue@kenet.or.ke

Who is KENET?

- Kenya Education Network (KENET) is a National Research and Education Network that promotes the use of ICT in Teaching, Learning and Research in Education Institutions in Kenya.
- KENET aims to interconnect all the Universities, Tertiary and Research Institutions in Kenya by setting up a cost effective and sustainable private network with high speed access to the global Internet.

KENET Network Coverage Map



- Primary fiberlinks
- Backup fiberlinks
- KENET POP
- Furthest connected campus

POP	Number of Campuses Connected
Nairobi POP	83
Kisumu POP	20
Mombasa POP	13
Eldoret POP	16
Nakuru POP	11
Meru POP	11
Total Campuses connected	152

Shared Services Available

Mail filtering

- KENET offers its members a secure utility to protect their email boxes from spamming. This is a non-chargeable service to the KENET members.

Campus Network Advisory Services

- KENET offers campus network advisory and support services to its members on certain projects on a cost-recovery basis.
- KENET offers advisory services in the following areas: Campus networks design, WLAN setup design, ICT Project management etc.

Virtual Private Network (VPN) Services

- Remote VPNs: allows remote access to University based resources once staff and students are out of campus. Some of these resources include: University based library resources (eg. online catalogues)
- Corporate VPNs: interconnects various campuses to access centralized resources like FMS system

Shared Services Available

Domain Services

- KENET registers, renews and hosts domains on behalf of its members. This is a non-chargeable service for the first domain registered and a standard charge for any subsequent domain names.
- KENET registers the following domains ac.ke, sc.ke and or.ke

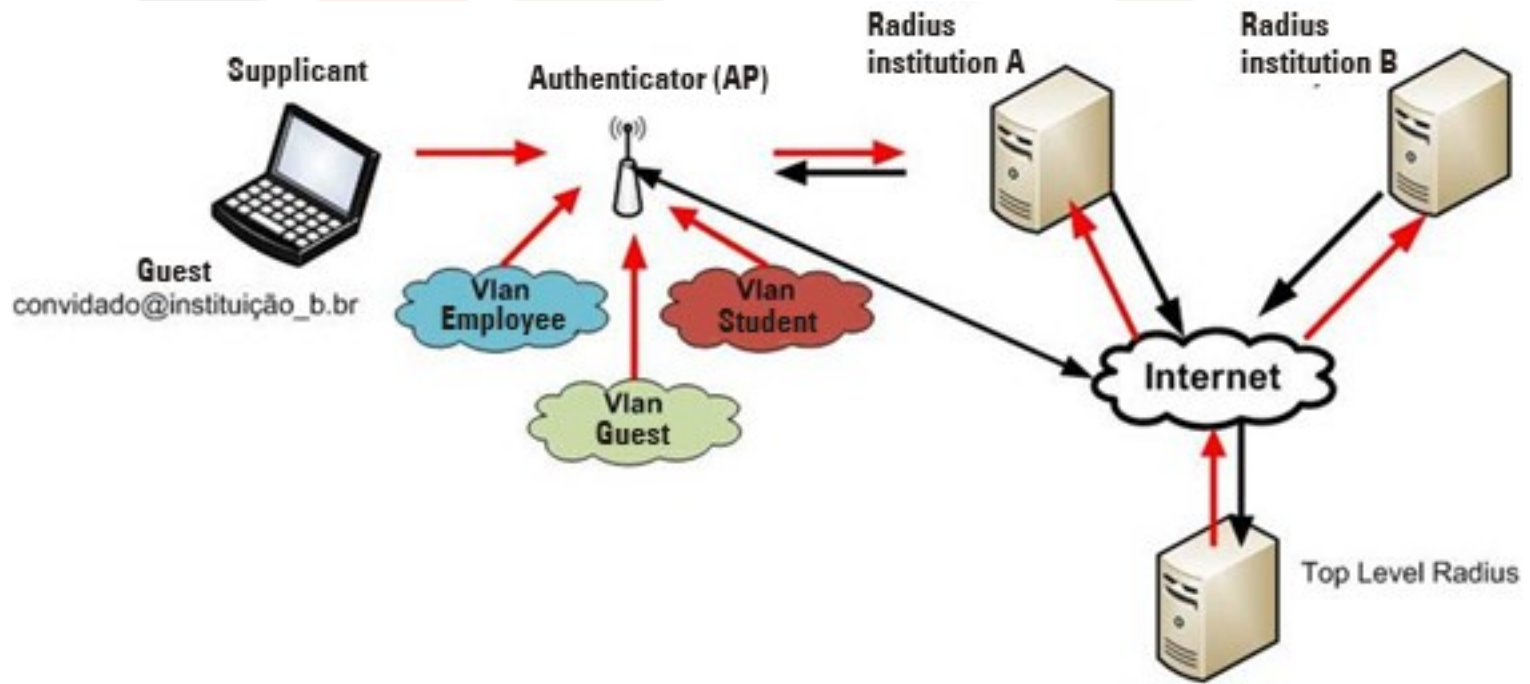
Webhosting

- KENET hosts websites for its members. This is a membership free service for the initial website.
- Any subsequent websites are chargeable at a standard fee, however members are required to administer the website.

Training and Capacity Building

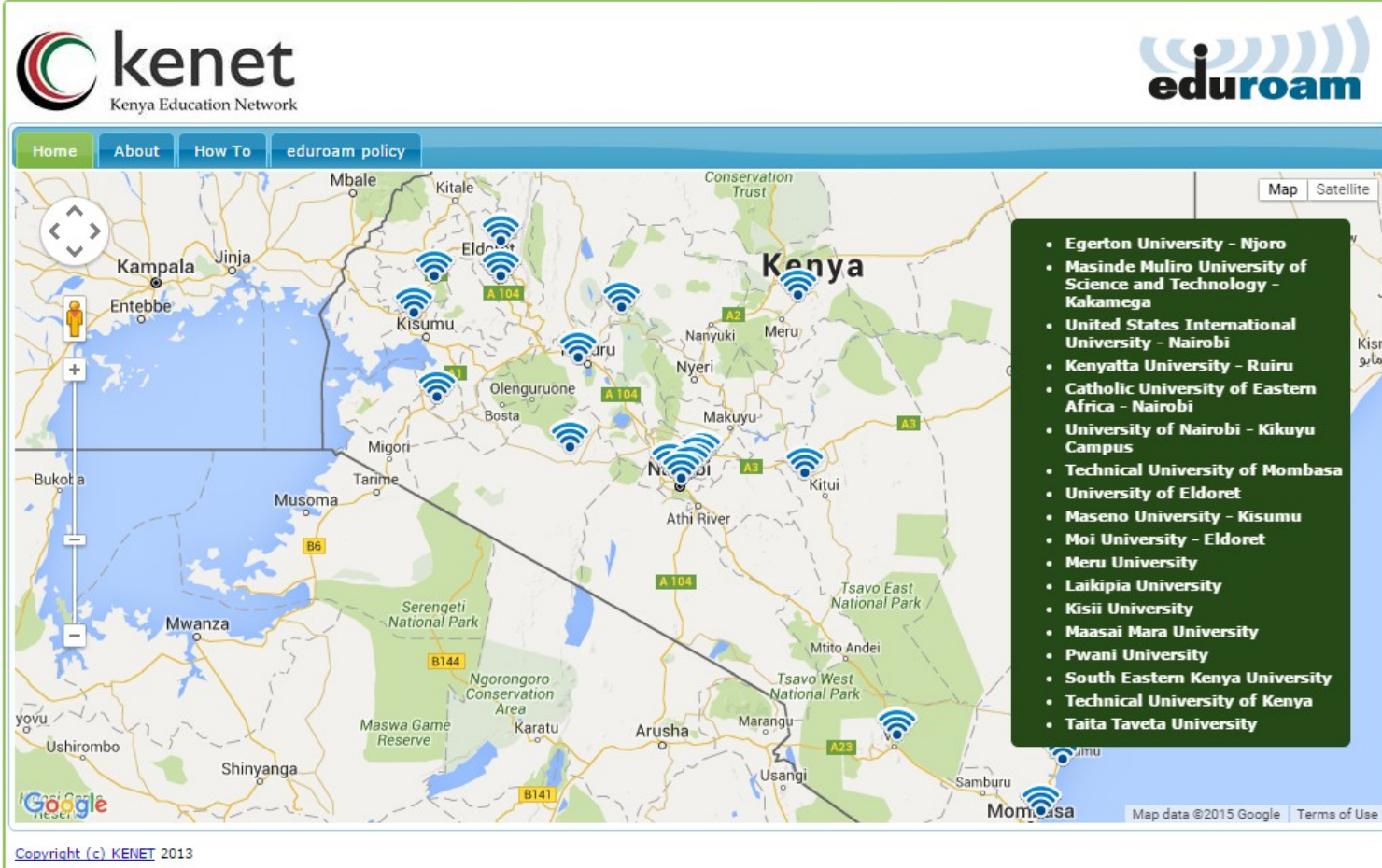
- Bandwidth Management and Optimization
- Campus Network Design
- Instructional Design Training
- Cyber Security

What is eduroam?



eduroam in Kenya

<http://eduroam.ac.ke/>



kenet
Kenya Education Network

eduroam

Home About How To eduroam policy

- Egerton University - Njoro
- Masinde Muliro University of Science and Technology - Kakamega
- United States International University - Nairobi
- Kenyatta University - Ruiru
- Catholic University of Eastern Africa - Nairobi
- University of Nairobi - Kikuyu Campus
- Technical University of Mombasa
- University of Eldoret
- Maseno University - Kisumu
- Moi University - Eldoret
- Meru University
- Laikipia University
- Kisii University
- Maasai Mara University
- Pwani University
- South Eastern Kenya University
- Technical University of Kenya
- Taita Taveta University

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Kenyatta University

- Public University
- Located 16 kilometers from Nairobi City
- Student population of over 70,000 students
- Has a number of campuses across Kenya.

<http://ku.ac.ke/>

Project Background

- KENET setup a pilot project in 2013
- 1 cisco 5508 WLAN controller, 1 server (RADIUS server), 5 cisco 1552e outdoor access points and 3 cisco 3500 indoor access points.
- Initial setup was in lecture halls and the library.
- Different SSIDs configured with a passphrase.
- eduroam was also configured

KENET Role

- Kenyatta University contacted KENET that they would like to expand the campus WLAN and more importantly implement eduroam.
- KENET played the following role:
 - I. Site Survey
 - II. Report preparation
 - III. RFP and tender document preparation
 - IV. Part of the tender evaluation committee
 - V. Part of the technical negotiations team
 - VI. Supervision of the works

eduroam implementation

- An additional 142 access points were installed.
- 130 cisco aironet 1702 indoor access points
- 10 cisco 1552 outdoor access points
- Database used MYSQL

eduroam implementation

To promote eduroam on campus, Kenyatta University took the following steps

- Switch off the open and passphrase SSIDs on the controller.
- Put eduroam posters across campus.
- Setup a webpage on their website about eduroam.

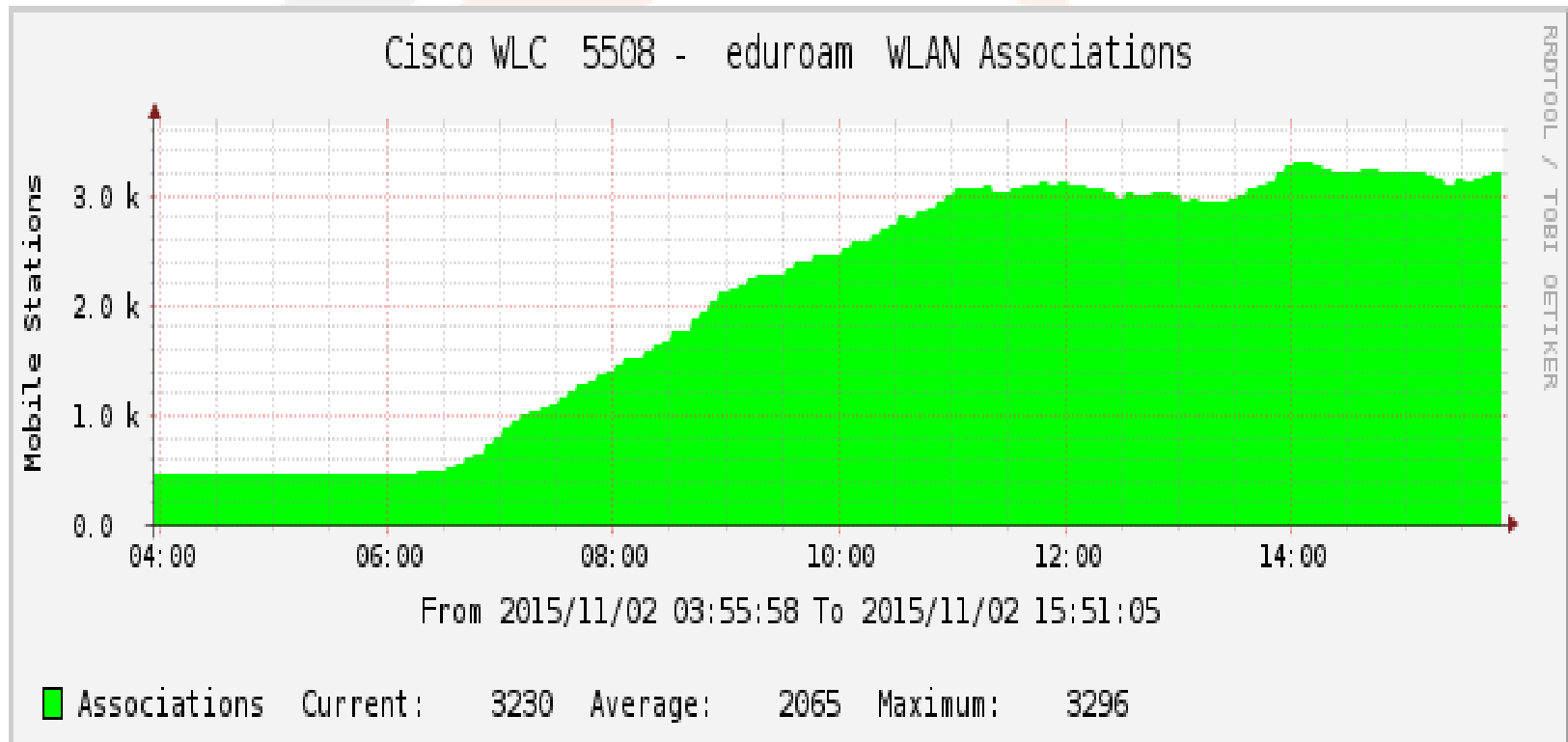


Challenges

- Access Point physical Security
- Project delay
- Lack of proper project management skills from the contractor
- Updating the database
- Configuration of client devices to join eduroam



eduroam impact



Recommendations

- Kenyatta University to implement eduroam across its other campuses.
- There are other stand alone access points on campus that are not on eduroam, these need to be configured for eduroam
- Configuration of eduroam CAT.



QUESTIONS
And
Answers

*Transforming education
through ICT*

Thank You

mnjue@kenet.or.ke

www.kenet.or.ke

Jomo Kenyatta Memorial
Library, University of Nairobi
P. O Box 30244-00100, Nairobi.
0732 150 500 / 0703 044 500