

The Tertiary Colleges membership category includes teacher training colleges (TTCs), TVCs, TTIs, national polytechnics, and medical colleges among other non-degree granting institutions.

KENET observed that most Tertiary College campuses operate with internet subscriptions of 20 Mb/s and below. This limited capacity proves insufficient to support the growing need for blended learning environments. National polytechnics and large TTIs have a subscription of 100 Mb/s to 500 Mb/s but often have large number of students. Despite the KENET target of 100 Mb/s per 1,000 students, the average internet bandwidth in tertiary colleges stood at 30 Mb/s, according to the 2022 annual core data from 35 participating institutions.

To better understand the actual internet bandwidth demand, KENET conducted an analysis of unlimited internet consumption from October 15 to November 14, 2023. The results revealed a significant gap between

subscription capacities and actual usage. Campuses with subscriptions below 20 Mb/s exhibited average unlimited consumption in the range of 30 to 60 Mb/s, indicating a clear discrepancy in meeting the demands of modern educational technologies.

Understanding the need for enhanced connectivity, KENET launched an Internet Connectivity Package tailored for Tertiary Colleges starting from January 1, 2024. This package offers low internet unit prices, starting at KES 750 Mb/s per month, with the highest unit prices at KES 2,500 per Mb/s per month for campuses connected using more expensive leased lines. The minimum internet bandwidth subscription capacity has been set at 50 Mb/s.

KENET will migrate as many tertiary college campuses as possible to KENET-owned last mile links, with minimum capacities of 200 Mb/s (and 1,000 Mb/s for campuses on last mile fiber) by June 2024.

The Inclusive Connectivity Package

The Tertiary Colleges Connectivity and Educational Technology Services Package is outlined below:

- 1. Internet Bandwidth Capacity:** A minimum of 50 Mb/s per campus for a committed period of 36-60 months, with aggregated subscriptions at a minimum of 750 Mb/s. Last mile links benefit from a minimum capacity of 100 Mb/s for unlimited internet during evenings, Fridays, and weekends, with all other upgrades to 100 Mb/s.
- 2. Internet Bandwidth Unit Price:** Ranging from KES 750 to KES 2,500 per Mb/s per month. The lowest price is applicable to campuses on KENET-owned last mile links.
- 3. Basic Digital Campus Infrastructure (DCI):** KENET will provide one switch, three WiFi access points, and a secure access router with a firewall for free. Optional UPS or solar inverter will also be available. These equipment will remain KENET's property for up to five years before donation to the tertiary college.
- 4. Web Hosting:** The first primary website will be hosted for free by KENET, with additional websites available as a paid service.
- 5. Domain Registration and Hosting:** Free institutional domain registration and hosting for the first primary domain, with additional domains as paid services.
- 6. Institutional Email:** Support for institutions to migrate to institutional email hosted by Google, a free service for educational institutions.
- 7. eLearning Portal (Moodle LMS):** Setup and hosting is a paid service, with initial capacity building for lecturers and ICT staff provided free of charge.
- 8. KENET Web Conferencing Platform:** A free membership service used for remote teaching, virtual meetings, and webinars.
- 9. Capacity Building for Lecturers and ICT Staff:** Both in-person and online training available at reasonable costs.
- 9. Extension of eduroam WiFi:** eduroam setup will be offered on both on and off-campus student hostels as an enhanced DCI service, payable quarterly over the internet connectivity period.

Transforming Learning, Research and Working Environments Using ICT