



## CONNECTIVITY AND DIGITAL ENTERPRISE SERVICES

### 1. Affordable, Dedicated & Fast Broadband Internet

KENET provides members with a secure, fast, reliable, and dedicated Internet connection that promotes research, education, innovation, and collaboration among member institutions and helps them accomplish their educational and research mandates.

The connectivity services portfolio consists of the following value add services (offered at no additional cost)

- Proactive Support & Helpdesk
- Realtime Bandwidth Monitoring & visualization dashboards
- Bandwidth Optimization
- Public Internet addresses allocation
- Email filtering & cleaning
- Cybersecurity Emergency Response Team (CERT) services to mitigate attacks or recovery from attacks.

The digital enterprise services portfolio consists of services offered at a fee to member institutions. These services include:

### 2. Community Data Centre & Cloud Services

KENET operates a community cloud infrastructure in Kenya that allows member institutions to lease virtual resources for hosting their digital services such as learning management systems, Enterprise Resource Planning (ERP) systems, Institutional Repositories, and Disaster Recovery Sites, just to mention but a few.

This service allows KENET member institutions to roll out their digital services strategies without the encumbrance of high capital investment (CAPEX) costs by allowing member institutions to pay recurrent fees based on their requirements and budgets. The cloud infrastructure can be used to host among others:

- Learning Management Systems (eg Moodle)
- Institutional Repository System (eg DSpace)
- Integrated Library System (eg KOHA)
- Student Information Systems

- Enterprise Resource Planning (ERP) systems
- Setup Disaster recovery site (either primary or secondary)

### 3. Storage Backup for Business Continuity

KENET provides data storage backup solutions to member institutions that aid in ensuring business continuity for critical services. KENET storage backup solution is hosted within Kenya at a high uptime facility with redundant connectivity options that ensure that data recovery process is completed in the shortest time possible.

### 4. Disaster Recovery Site for Business Continuity

To ensure business continuity, KENET provides server collocation space or virtual server hosting at secure locations with guaranteed high uptime of 99.95%. These facilities allow member institutions to install and manage their DR site at a location outside the member institution premises.

The service complements the primary digital services infrastructure at the member institution in case a disaster occurs by ensuring that critical services are provided at the disaster recovery location in one of KENET's facilities. KENET disaster recovery facilities hosted at KENET's Data Centers in Kenya with redundant electrical power, cooling and network connectivity infrastructure.

### 5. Remote Access for Business Continuity

The KENET Remote Access Services (also called KENET VPN) are the ideal solution for high-speed data communication between the campuses for member institutions requiring interconnecting multiple campuses, interconnecting the campus to banks and other financial services providers, and for remote working. KENET assists its members to set up Remote Access Services, including Remote and Corporate Virtual Private Networks (VPNs).



## EDUCATIONAL TECHNOLOGY AND RESEARCH SERVICES

KENET provides the following research infrastructures which allow researchers to access research e-infrastructures.

### 1. KENET Web Conferencing Platform

KENET has setup a free web conferencing platform <https://conference.ke/> for virtual classroom training, remote teaching/learning or meetings for use by the KENET member institutions. The platform allows for live and synchronous interaction between the teacher and the learners as they are participating in learning activities.

### 2. eduroam

eduroam (education roaming) is the secure, world-wide roaming and free wi-fi access service developed for the international research and education community. eduroam as a service allows students, researchers, and staff from participating institutions to use their login credentials provided by their parent institution to access Internet connectivity seamlessly and for FREE across the institution's campus, campuses and when visiting other participating institutions.

### 3. KENET Research IT & Education Cloud

The KENET Research, Teaching & Learning Cloud (<https://vlab.ac.ke/>) is a virtual cloud computing environment that provides research ICT services to the Kenyan community of researchers in different areas such as Bioinformatics, Public Health and Materials Science among others. The end goal for the Research IT & Education cloud is to provide computing and storage services to the researcher solving the problems at hand.

### 4. Learning Management System (LMS) Setup and Hosting

KENET has the technical expertise to

design, configure and host LMSs for delivery of Elearning content to learners. KENET also conducts various capacity building initiatives to train faculty in the development of eLearning content.

### 5. Identity and Trust Services

KENET's Identity & Trust Services (e.g. <https://rafiki.ke>) are globally accredited Identity & Trust Infrastructure that aim to provide easy access and facilitate Single and centralized authentication for KENET and its member institutions to research materials and services globally using their home institution credentials, without having to create another account. This allows users at the institution to access digital subscription databases (such as digital libraries, journals, etc) while on or off-campus using access credentials assigned to them at their institution.

### 6. Research engagement research and travel grants for early career faculty and researchers

As part of research engagement, KENET offers small collaborative research grants to research team whose Principal Investigators (PIs) are early career faculty and/or researchers. These grants also support KENET Special Interest Group (SIGs) in the data-intensive and compute-intensive research areas.

KENET also offers travel grants to faculty and graduate students attending indexed conferences as part of research engagement through the KENET SIGs.

### 7. Capacity building of faculty and researchers

KENET convenes regular virtual or in-person forums for capacity building of faculty in educational technology or in emerging digital technology areas.

# KENET SERVICES

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**Email: [info@kenet.or.ke](mailto:info@kenet.or.ke) Website: [kenet.or.ke](http://kenet.or.ke)**





**The Kenya Education Network Trust (KENET) was established in 1999 as a non-profit membership organization and is registered as a Trust to serve education and research institutions in Kenya. We focus on providing value added broadband connectivity, enterprise cloud and data services and collaborative research services to the education and research institutions in Kenya. We have connected over 472 member institutions campuses in 46 counties in Kenya.**

As a KENET Member, you Stand to Benefit from the following services

- a) Affordable high-speed Internet connectivity and digital services
- b) Capacity building for faculty, ICT staff and students of member institutions
- c) Access to advanced research services and global high performance computing facilities (e.g., Africa Science Grid Gateway)
- d) Cyber security support services (i.e., CERT services)
- e) Specialized Education Technology and research IT services
- f) Advanced ICT advisory services in member network design and diagnostics, ICT infrastructure procurement and project management, campus security and ERP advisory services.



## MEMBERSHIP SERVICES

### 1. Website Hosting and Domain Registration Services for Member Institutions

KENET is a .KE domain registrar that hosts the primary domain (.ac.ke and sc.ke domains) and the primary website. We also provide domain name registration, renewal, and hosting services to our members currently available from the KENET domain portal <https://domain.kenet.or.ke/>

### 2. Cybersecurity Incident Response

KENET operates the Cybersecurity Emergency Response Team and Co-ordination Center coordination center (KENET CERT) that promotes cybersecurity awareness and promotes cybersecurity capacity building, information sharing, incident resolution as well as coordinating and assisting member institutions in responding effectively to cyber security threats and incidences.

With the increase in adoption of digital technologies, transactions, and services; institutional cybersecurity posture and maturity are critical in ensuring continuity in the core functions of an institution. KENET CERT supports member institutions to not only improve on their cybersecurity maturity but also to implement adequate controls and measures against potential cybersecurity risks.

### 3. Capacity Building and Digital Skills for Digital Transformation

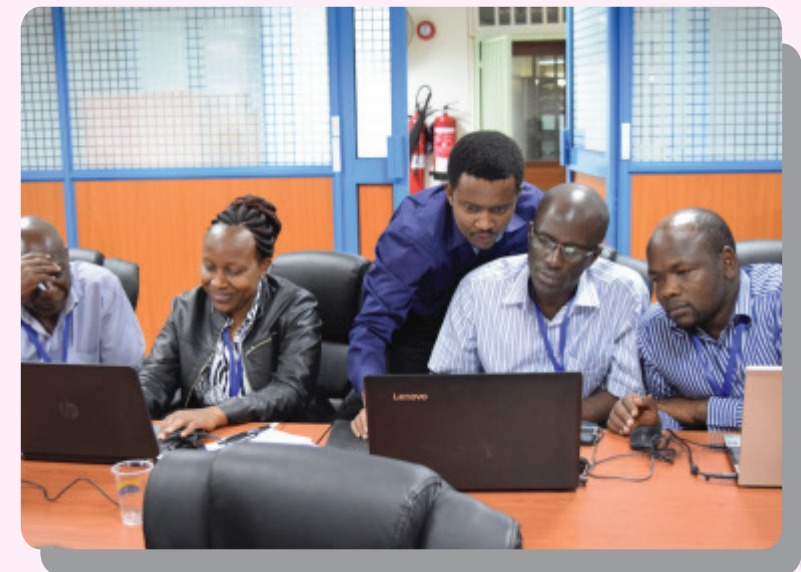
KENET has developed physical and online courses to equip the KENET Community with relevant skills. The capacity building initiatives are designed for ICT Staff, Faculty, and other stakeholders within member institutions in area of cybersecurity awareness. Some of the courses are provided by KENET include: Cyber Security awareness; Introduction to Moodle; Scalable Campus LAN and WLAN Design; Network Monitoring and Management

To register for these courses, visit the KENET website <https://www.kenet.or.ke/content/kenet-online-courses-0>

### 4. Convening Community Forums and Research-based Digital Technology Benchmarking

KENET convenes regular online and in-person forums to build capacity of senior leadership to enhance readiness for digital transformation of member institutions. This includes the annual Heads of Institutions; annual ICT directors forum; biennial librarians forums.

KENET also collect annual core data and publishes annual core data report for benchmarking in different areas including cybersecurity readiness; critical ICT workforce; availability and affordability of high-speed internet; ERP deployment.



## DIGITAL CAMPUS INFRASTRUCTURE SERVICES

### 1. Digital Campus Infrastructure Development

The digital campus infrastructure development service aims at supporting KENET member institutions to modernize, expand or develop their digital campus infrastructure, including campus WiFi coverage and private cloud infrastructure. This service is based on a negotiated build and transfer model with payment plan period of up to 24 months.

### 2. Managed Campus Network as a Service

Campus Network as a Service (CNaas) is a KENET service that extends the monitoring, management and support functions provided by KENET Network Operations Center (NOC) extended to the digital campus infrastructure.

This allows KENET member institution to focus on their core functions with KENET managing the campus network as service.

### 3. Direct Engineering Support and Technical Advisory services

Direct Engineering Support (DES) is provided to members to enhance the institution's staff implementation of transformational changes to ICT resources and infrastructure.

The DES services address campus network infrastructure, cyber security, systems design and administration, network audits, and hands-on capacity building among others aimed at improving ICT services delivery. These services are offered sometimes as a donated service or on a cost-recovery basis.

### 4. Technical Advisory Services

These are offered for certain projects on a cost recovery basis. Technical Advisory services are offered include the following areas; campus network design, WiFi setup design, VoIP telephony, campus fiber network design, electrical power systems for digital infrastructure and implementation and ERP requirement analysis and implementation guidelines.

The deliverables of the technical advisory services include campus network designs, RFP preparation and technical support in evaluation, and project management.

