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KENET Community Cloud Services

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Agenda

- Introduction
- KENET Community Services
- Other KENET Services

Introduction

- KENET has a community cloud services dubbed 'KENET shared services'
- The services are hosted in two operational data centers (DCs) - *a mirror of each other*
- The DCs provide:
 - ✓ High availability & Resilience
 - ✓ Scalability

Community Services

- *Domain/Web Hosting*
 - ✓ *Domain registration & hosting – registers, renews and hosts domain on behalf of members*
 - ✓ *Web Hosting – hosts websites for members*
 - ✓ *Caching*
- *Infrastructure as a Service (IaaS)*
 - ✓ *Commonly referred to as Virtual hosting*
 - ✓ *Provision of virtual servers and associated storage*
- *Storage as a service – for offsite backups of critical data*
 - ✓ *Operates two storage systems with combined storage capacity of 116TB per site*
 - ✓ *Scalable to 1PB*

Community Services - contd

- *Equipment Co-location*
 - ✓ *Bringing servers to be hosted at KENET data centers*
- *Data Recovery Site (DR)*
 - ✓ *Either co-location of servers or use virtualised environment (virtual servers & storage)*
- *Video/Web Conferencing*
 - ✓ *The video conferencing facilities are located in Nairobi, Nakuru, Eldoret, Kisumu and Mombasa*

Other Services

- **Eduroam (*Education Roaming*)**
 - ✓ *World-wide roaming access service that allow students, researchers and staff from participating institutions to access internet*

- **Advanced Research Services**
 - ✓ KENET has Federated Identity Service to access the Africa Science gateway. The system consists of the following:-
 - A certificate authority (CA) that issues and verifies the digital certificates.
 - A user database that stores user details with a web interface for user registration and approval – authentication
 - An identity provider which acts as a 'single-sign in', or logging-in system for computer networks and the Internet
 - Africa Science gateway - portal that gives researchers access to advanced applications for Physics, Chemistry, Computer Science, and Big Data Research

Other Services

- E-mail Filtering
 - ✓ Secure utility to protect email from spamming
- Campus Network Advisory services
 - ✓ Campus design & project management
- Security Services
 - ✓ KENET Operates CERT for the education and research community
 - Monitor security vulnerabilities
 - offer security advice & alerts
- Capacity Building
- Virtual Private Network (VPN) services
 - ✓ *Setup of VPN that ride on top of KENET network*

*Transforming education
through ICT*

Thank You