

The background of the slide features a blue-toned globe with a grid of latitude and longitude lines. Overlaid on the globe is a glowing blue cloud with a keyhole-shaped cutout in the center. The ASREN logo, consisting of the word "ASREN" in white capital letters followed by three overlapping white hexagons, is positioned in the upper right quadrant.

ASREN

ASREN Cloud

For the pan Arab Research and Education Communities

Overview

AfricaConnect is one of a series of EU-funded projects that provide infrastructure to connect research and education communities (R&E) in regions outside of Europe and to interconnect them with the pan-European GÉANT network. The current phase, AfricaConnect3 (2019-2023), is continuing to provide not only dedicated high-speed R&E connectivity but also research collaboration platforms in a growing digital cooperation space across Africa.

Cloud has brought new attention to research and education communities. Cloud provides ubiquitous, convenient, on-demand network access to a shared pool of configurable computing resources that can be rapidly provisioned for seamless access. Such resources include virtual servers, storage, applications, and services that are specific to the research and education communities. Infrastructure as a Service (IaaS) and Software as a Service (SaaS) emerge as key development service areas for R&E communities.

Hardware

ASREN recently installed new hardware in its server rack located at Slough - UK, consisting of powerful CPUs, terabytes of storage capacity, and hundreds of Gigabytes of RAM.

This virtualized infrastructure enabled ASREN to run the long-needed network operations and management functions, and some administrative services which are essential to the ASREN organization.

Examples of network operations are Zabbix and Cacti software applications that have been deployed for 24x7 network monitoring and automatic notifications in case of failures and/or issues of BGP (Border Gateway Protocol) peering with NREN partners across the Arab region and with GÉANT.

Zabbix and Cacti are now critical applications and represent the core functions of the ASREN NOC (Network Operation Center) and connectivity. Examples of administrative services are ASREN DNS (Domain Name System) which is critical to manage the asren.org domain and services which now include mailing lists and storage and soon will be expanded to operate the ASREN identity federation.

The ASREN Cloud platform provided crucial support to the Federated Identity training that was recently organized to build capacity aiming at AAI development for member NRENs. This has been facilitated by provisioning several virtual machines for the instructors and trainees, allowing them to get access to hands-on components and training scenarios executed in a real-life network environment.

Services

ASREN is proud to provide its NREN community with a set of Cloud services to meet their needs. Examples of potential services include, but are not limited to:



NOC services to monitor and manage international networks and border gateway protocol for interdomain peering to ASREN and GÉANT PoPs.



Software as a Service including federation as a service and eduroam as a service.



Virtual machines with powerful computing resources for scientists and educators to run simulation models and host services for scientific research.



eduID.Africa services with continental catch-all-idp and metadata services.



Storage and file transfer services in the context of GEANT's FileSender to facilitate large file transfers.

Access

To access the ASREN Cloud, please fill in a request form:

<https://forms.gle/QFcNAMVXGZLhe11h7>

If you would like to discuss your specific Clouds needs, feel free to contact us at:

Cloud-Services@mlist.asren.org