

# Contributing to research and education in the Arab region

through the provision of high-speed networks and advanced pan-Arab e-Infrastructure

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### **Research and Education Networks**

Research and education are vital to prosperity and economic development of societies. They demand access to resources, applications, massive volumes of data, high performance and grid computing, and content. To server this growing need, a worldwide trend has become apparent to establish dedicated networks for research and education away from the commercial Internet. It starts with NREN (National Research and Education Networks), which provides dedicated connectivity to Universities, Research centres, Libraries, and Hospitals. NRENs then connect to regional networks to interconnect with global REN. In addition to high-speed networks, NRENs provide services to REN communities to enable collaboration and shared access. Furthermore, some NRENs provide commercial internet services and establish Internet Exchange Points for local peering and exchange of data traffic.

## **ASREN**

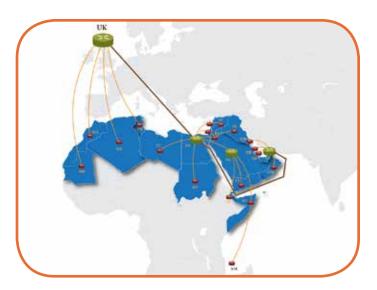
The Arab States Research and Education Network (ASREN) is the regional research and education network of the Arab region. Since its inception at the League of Arab States in 2011, ASREN has been Honorarily Chaired by the Secretary General of the League of Arab States and Chaired by HE Talal Abu Ghazaleh. ASREN's vision is to boost scientific research, enhance education, and foster innovation in the Arab countries.

#### The main objectives of ASREN are to:

- 1. Establish and operate regional e-Infrastructures dedicated to e-Science and education across the Arab Countries.
- 2. Provide services and access to voluminous resources and repositories to facilitate collaboration.

#### **ASREN Network**

ASREN's regional network builds on the EUMEDCONNECT and AFRICACONNECT network infrastructure that has been cofunded by the European Commission. The Arab regional network will evolve to interconnect the NRENs in the 22 Arab countries through the two main open light-path exchange points that are currently planned in Fujairah and Cairo. Additional exchange points are envisioned in Jeddah, Djibouti, Amman and the Maghreb region. ASREN network currently interconnects with GEANT and other regional RENs via its PoP (point of presence) in London.



#### **Arab NREN Partners**

ASREN is a non-profit association of Arab NRENs and their representatives. With partners and in close coordination with the League of Arab States, GEANT, and Talal Abu-Ghazaleh Global, ASREN continues to promote and support e-Infrastructure developments in the region, mainly through the generous financial support of the European Commission (EC) in the context of the EUMEDCONNECT and AFRICACONNECT projects.

The current Arab NREN and associated partners includes representation from Algeria, Bahrain, Egypt, Jordan, Iraq, Lebanon, Morocco, Oman, Palestine, Qatar, Saudi Arabia, Somalia, Sudan, Tunisia, and United Arab Emirates.

## Activities

- Operating its PoP in London and facilitating its linkage with GEANT, Internet2, and other regional networks.
- Establishing high-speed networks and developing e-Infrastructures to interconnect Arab NRENs.
- Leading EUMEDCONECT and AFRICACONNECT implementation in the Arab Mediterranean countries.
- Engaging actively in EC funded projects for a wider deployment of services including eduroam, eduGain and other scientific applications.
- Increasing national and regional visibility through cooperative agreements and projects and holding iconic conferences featuring technology advancement and e-Infrastructure development.
- Training professionals and engineers on highly advanced technologies through specialized capacity building and knowledge sharing programs.

## Services

## Provide connectivit via:

- Dedicated high-speed research and education networks in Europe, the US, and around the globe.
- Commercial internet with closed access to content distribution networks.
- Support NREN planning and development.
- Interconnect NRENs across the Arab region through a high-speed network via the Arabia Global Exchange (AGE) Points, now established in London and will soon be set up in Fujairah.
- Provide peering through physical fibre cross connects, circuit switching, or packet based VPN services, with equal and open access to all R/NRENs, carriers, and content providers.
- Provide unified access to all research and education communities with standard communication facilities and capabilities, leading to better sharing of resources, information, data, knowledge and expertise.
- Provide interconnected Arab universities and research centres with seamless and federated access to tremendous globally available research and education resources and databases, digital repositories, and computing infrastructures.
- Setup Science Gateway with community-development tools, applications, and data, integrated via a customized portal.
- Setup eduroam (education roaming) service as a worldwide roaming access service developed for the international research and education community.
- Create awareness, capacity building and technical support.

## Main Partners, shareholders, and Sponsors

- Abu Ghazaleh & Co. Consulting Germany
- Egyptian Universities Network Egypt
- Jordanian Universities Network Jordan
- Centre National Pour La Recherche Scientifique et Technique Morocco
- Sudanese Research and Education Network Sudan
- Computing Center Al Khwarizmi Tunis
- Somali Research and Education Network Somalia
- Ministry of Education Palestine
- Ministry of Higher Education and Scientific Research Iraq



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