

**MINISTRY OF ECONOMY (ME)**  
**KOSOVO DIGITAL ECONOMY (KODE) PROJECT**  
**TERMS OF REFERENCE**

**Senior Infrastructure Engineer for KREN**

**(Ref. No. KODE/IC/2.2.4.1a/2022)**

**BACKGROUND**

The Government of Kosovo has secured support from the International Development Association (IDA) (hereinafter ‘the Bank’) for a Kosovo Digital Economy (KODE) Project. The KODE Project aims to improve access to better quality and high-speed broadband services in project areas and to online knowledge sources, services and labor markets among citizens, and public and academic institutions.

**The Project is structured along three components:** Digital Inclusion, Digital Work and Empowerment, and Project Implementation Support. Two substance components of the Project are outlined below.

**Component 1: Digital Inclusion** component will support digital inclusion through: (a) the expansion of digital connectivity through the co-financing of deployment of high-speed broadband connectivity in areas that have been identified as not connected or underserved, and (b) improving of the enabling environment for wireless broadband services, through the deployment of the National Spectrum Monitoring System (NSMS).

**Component 2: Digital Work and Empowerment** will support the Youth Online and Upward (YOU) Program and increased access to knowledge, information and online services through subcomponents:

*2.1 Youth Online and Upward (YOU) Program*

provision of training for young people and their connection to online working opportunities.

*2.2 Increasing Access to Knowledge, Information, and Services*

Provision of support to (i) set up a ***Kosovo Research and Education Network (KREN)*** to improve access of students, professors and educators of ***Higher Educational Institutions (HEIs)*** in Kosovo to knowledge, research networks and (ii) connect KREN to the GEANT network.

**The present Terms of Reference concern to the subcomponent 2.2 of the Project - Increasing Access to Knowledge, Information, and Services. More specifically, to the management of KREN network infrastructure.**

## About KREN

KREN Mission is to empower digital transformation in the research and education community of Kosovo, fosters innovation and develops advanced infrastructure and services.

KREN goals are:

- Advanced information and communication infrastructure  
for the academic and research community, including KREN Data Center and private (managed, safe and fast) network infrastructure.
- Platform and Software as service  
Improvement of higher education and science as well as work and lives of students, associates, lecturers, and scientists by providing platform and software as service for better collaboration and communication, diverse content, research, LMS platforms and API services.
- Participation and membership into international organizations  
Membership and proactive participation in GEANT association and other international research and educational organizations.
- Support and education for KREN community  
Establishment of a research & education community, providing support to knowledge dissemination and information exchange.

Other important information about KREN are as follow:

Physical infrastructure:

- From January 2022 KREN has a fully operational Data Center with related infrastructure in ITP Prizren,
- The Data Center is configured as a hybrid cloud infrastructure running on the Azure Stack Hub on-premises platform,
- Azure Stack Hub and Azure cloud are the most important platforms for all other services provided by KREN for HEIs (IaaS, PaaS, SaaS and HaaS),
- KREN use leased fibre dedicated connection with campuses of HEIs. It is a private communication network managed by KREN Network Operation Center,
- KREN has leased capacity connection between KREN Data Centre in Prizren and GEANT PoP (Zagreb).

Membership in International Organizations

- KREN is an Associate Member of the GEANT Association and
- KREN is a member of the RIPE organization.

Membership and communication within Kosovo

- Out of the 20 HEIs, 16 have already signed Memorandum of Understanding (MoU) with KREN,
- The Ministry of Economy is providing permanent logistic support to KREN, especially from the ICT Department,

## **OBJECTIVE OF THE ASSIGNMENT**

The KODE/ME intends to hire a Senior Infrastructure Manager who will be responsible for managing and monitoring network operations in line with the KREN mission and goals. The accomplishment of these activities shall be done in coordination with the Digital Work and Empowerment Coordinator of the Component 2 in a timely, effective, efficient, and results-oriented manner.

## **SCOPE OF WORK**

KREN **Senior Infrastructure Engineer** will participate in all activities related to the KREN private network infrastructure with focus the first and second KREN's goals - planning, configuring, managing, supporting and optimizing all new and existing network, hardware, software, connections and communication links and services.

## **DUTIES AND RESPONSIBILITIES**

Principal functions of the KREN **Senior Infrastructure Manager** will include, but are not limited to:

- Lead design and development of current and future network architecture as well as Network Operations Strategy.
- Perform research and make recommendations on network products, services, protocols, and standards in support of network upgrade and development efforts.
- Manage to the development and update of the KREN service portfolio that will be offered to its users.
- Manage, monitor and maintain the network operations - leads all aspects of the network service including design, engineering, security, implementation, and operations for the KREN's network.
- Support and coordinate installation of in-house and remote hardware and software across the organization's network.
- Responsible for admission, approval and administer all equipment, hardware, and software upgrades.
- Practice network asset management, including maintenance of network component, inventory, life cycle management and related documentation.
- Manage and monitor optimal operation of all network hardware and equipment, including routers, switches, hubs, UPSs, and so on.
- Manage and monitor problem-solving and provided support for HEIs.

- Manage and ensure effectiveness of security solutions, including firewalls, anti-virus solutions, and intrusion detection systems.
- Manage the Azure dashboard operational costs; conduct near- and long-term financial forecasts for expanded functionality/user base.
- Monitor the administration of user accounts, permissions, and access rights in Azure Active Directory and local AD.
- Provide guidance to junior members of the team.
- To be ready to work on ad-hoc emergency requests and out of working hours - if there will be an emergency.
- Manage and operate the cloud on premise solution.
- Present ideas, events and activities in a user-friendly interface/report - flow charts, data processing concepts and telecommunications principles.
- Execute analytical and problem-solving tasks.
- Prioritize and execute tasks in a high-pressure environment and make sound decisions in emergency situations.
- Conduct research into networking issues and products as required.

## **REPORTING OBLIGATIONS**

**KREN Senior Infrastructure Engineer** will report to and work under the direction of the Digital Work and Empowerment Coordinator of the Component 2. S/he will deliver monthly progress reports on her / his activity and any other ad hoc reporting requirements in coordination with the Project Director and Project Coordinator.

## **QUALIFICATONS**

- Bachelor's degree in relevant field (master's degree is preferable) required in the field of Telecommunications, Computer Science or other related academic fields.
- Preferable – CCNA, CCNP or other similar certifications as a proof for advance knowledge in professional networking.
- At least 3 year of relevant work/management experience as demonstrated through relevant references.
- At least 2 years in successful leadership of an infrastructure team.
- Experience in project management.
- Preferable experience in management of Cloud Services.
- Advance skills to communicate and draft various kinds of project documentation and reports.
- Hands-on experience troubleshooting hardware such as servers, routers, bridges, switches, hubs, modems, network interface cards, and so on.
- Strong interpersonal, written, and oral communication skills, graphical presentation of ideas and data processing concepts.
- Experience working in a team-oriented, collaborative environment with problem-solving tasks and responsibilities.
- Driving license and to be able and willing to travel throughout Kosovo.

- Fluency in Albanian and English. Knowledge of the Serbian language is an advantage.

## **TERMS OF THE ASSIGNMENT AND DURATION OF THE CONTRACT**

- The contract is for an initial period of 1 (one) year with a 3 (three) month probation period, at which time the performance of the consultant shall be evaluated.
- The remuneration will be paid monthly.
- The KREN Senior Infrastructure Manager will be offered opportunities to develop professionally by attending relevant training events and courses over the duration of the contract.
- KREN infrastructure is a unique hybrid cloud infrastructure in Kosovo and in the region and KREN is part of the pan-European network GEANT - hence the Network Manager will have the opportunity to attend and skill up its knowledge and experience through various trainings, workshops, technical forums alongside other GEANT community members.
- KREN will organize special and professional trainings for staff to further improve and acquire the necessary knowledge, **especially trainings and certifications related to Azure cloud services.**
- It is required that the Infrastructure Network Manager would assume its position **immediately.**
- The KREN Senior Infrastructure Manager shall be engaged on a **full-time basis** for the duration of the Project.

## **SELECTION PROCES**

The selection of Senior Infrastructure Manager will be carried out in accordance with the World Bank's Procurement Regulation for Investment Project Financing Borrowers for Goods, Works, Non-Consulting and Consulting Services, July 2016 Revised November 2017.

Shortlisted candidates will be invited in the interview.

## **PLACE OF EMPLOYMENT**

Place of employment is in Prizren at:

***Innovation and Training Park (ITP), Ukë Bytyçi str. 20000 Prizren, (ex KFOR Military Base Camp in Prizren),*** with possibility to travel to Prishtina to the KODE/ME premises, as needed.