

# **Terms of Reference for Manager Network & Support**

## **1. BACKGROUND INFORMATION**

### **1.1. Beneficiary Country and Province**

**Islamic Republic of Pakistan, Punjab Province**

### **1.2. Contracting Authority**

Under the TALEEM Programme and in agreement with Global Partnership for Education (GPE), the Programme Monitoring and Implementation Unit (PMIU), School Education Department (SED), Government of the Punjab is the contracting authority.

### **1.3 Objective**

One of the core objective of the PMIU is to provide leading research and analytical services and value-added information, studies, and solutions to the School Education Department (SED) in Punjab and other users such as donor/ grant organizations, NGOs etc. in a manner that broadens and strengthens the knowledge base on school education in Punjab and maximizes the effectiveness of the Punjab Education Sector Reform Programme (PESRP).

The position is created as part of the Software Migration and Data Centre creation that is to be developed by PMIU/SED. The Manager Network & Support Supervises information technology (IT) support staff; oversees computer system and software maintenance and repair; assists with computer equipment purchasing and installation; and maintains networks and connectivity for users. This resource will also assist in existing data and software migration from PITB Data Center including creation of inhouse Data Center.

### **1.4 Scope of work:**

The key tasks and responsibilities to be accomplished by the Manager Network & Support are as follows:

- i. Should be able to conducts trainings and orientation to new technology users so that they can acquaint themselves with the equipment and network
- ii. Ability to carry forward the team by mentoring them during the critical tasks and project assignment
- iii. Must be a team player and also who can take decision and work independently if the situation demands
- iv. Must be able to make cost analysis and budgets (OpEx / CapEx)
- v. Hands on experience of network management and network management tools including SNMP, OpenNMS, RANCID, Cacti, Nagios.
- vi. Knowledge of ISP systems, for example RADIUS, TR-069, DNS
- vii. Working Knowledge of ISP systems, such as RADIUS, TR-069, DNS

- viii. Knowledge of network design and architecture principles
- ix. Knowledge of Internet governance and Internet organizations, including IANA, RIPE, IETF, ICANN and IEEE
- x. Exhibits Experience with some of the mainstream vendors - Redback, Juniper, Cisco, Brocade, MRV, A10

### **1.5 Key Deliverables:**

- 1) Conducts training and orientation for new technology users, IT support and Call Center staff and helps them become familiar with equipment and networks
- 2) Participate and attend technology exhibitions, seminars and shows to stay at the top of new technologies (software / hardware) hitting the market
- 3) Ensures all users benefit from effective technology and efficient Internet access, and continually assesses needs and requirements
- 4) Oversight and management of technical resources involved with the design, implementation, documentation and support of Network Infrastructure (routers, firewalls, load balancers, monitoring tools, LAN, WAN, WiFi, hosting low latency infrastructure).
- 5) Organize support, troubleshooting, and repair for IT equipment and networks
- 6) Monitors online security for users and networks and takes appropriate steps to address security breaches if necessary
- 7) Manages departmental budget and tracks spending on equipment and staff
- 8) Develops and maintains emergency plans to address equipment, power, or security failure to ensure preservation of technology and data
- 9) Participation in projects. Ensure that project tasks are completed within the agreed timelines.
- 10) Responsible for the management of the organization's email accounts
- 11) Manage IP Multicast and associated protocols (IGMP, PIM, MBGP, MSDP).
- 12) Responsible for the management of the company's Internet and information technologies (IT) assets
- 13) Offers specialized expertise in IT demands for a particular industry, such as education, finance, or manufacturing
- 14) Maintenance of all information technology equipment
- 15) Manage the company's system firewall protection applications or software
- 16) Account for backup of systems and all data
- 17) Make recommendations for the improvement of the company's IT department
- 18) Handle the organization's hosting information
- 19) Responsible for the installation and configuration of software on computer systems
- 20) Handle diagnosis and troubleshooting of computers to discover and solve hardware and software faults
- 21) The Manager Network & Support will be responsible to perform any other tasks assigned and entrusted by the PD-PMIU (PESRP)

### **Terms of Reference for Development Operations Engineer**

## **1. BACKGROUND INFORMATION**

### **1.3. Beneficiary Country and Province**

**Islamic Republic of Pakistan, Punjab Province**

### **1.4. Contracting Authority**

Under the TALEEM Programme and in agreement with Global Partnership for Education (GPE), the Programme Monitoring and Implementation Unit (PMIU), School Education Department (SED), Government of the Punjab is the contracting authority.

### **1.3 Objective**

One of the core objective of the PMIU is to provide leading research and analytical services and value-added information, studies, and solutions to the School Education Department (SED) in Punjab and other users such as donor/grant organizations, NGOs etc. in a manner that broadens and strengthens the knowledge base on school education in Punjab and maximizes the effectiveness of the Punjab Education Sector Reform Programme (PESRP).

The position is created as part of the Software Migration and Data Centre creation that is to be developed by PMIU/SED. DevOps engineer will ensure a smooth deployment process along with hardening the Linux environment with up to date security patching and upgrades. DevOps engineer will help in installation of software patches and server configuration for optimal performance. Assist in existing data migration from PITB Data Center.

### **1.4 Scope of work:**

The key tasks and responsibilities to be accomplished by the DevOps Engineer are as follows:

- i. Strong proficiency in LAMP (Linux, Apache, MySQL and PHP) environment
- ii. Experience in web and email server configurations and setup.
- iii. Experience maintaining and deploying highly-available, fault-tolerant systems at scale.
- iv. Experience in automation script (e.g. scripting via Bash etc.)
- v. Practical experience with Docker containerization and clustering (Kubernetes/ECS)
- vi. Version control system experience (e.g. Git)
- vii. Experience implementing CI/CD (e.g. Jenkins etc.)
- viii. The DevOps Engineer will be responsible to perform any other tasks assigned and entrusted by the PD-PMIU (PESRP)

### **Key Deliverables:**

- 1) Deploy and maintain critical applications on multitier architecture.
- 2) Implement automation, effective monitoring, and infrastructure-as-code
- 3) Deploy and maintain CI/CD pipelines across multiple environments
- 4) Support and work alongside a cross-functional engineering team on the latest technologies
- 5) Iterate on best practices to increase the quality & velocity of deployments
- 6) Own the delivery, scalability, and reliability of the backend platform serving hundreds of thousands of concurrent users.
- 7) Writes specifications and documentation for the server-side features
- 8) Analyzes the technology currently in use and develops plans and processes for improvement and expansion. The DevOps engineer provides support for urgent analytical needs.
- 9) Builds, installs, configures, and maintains IT solutions.

- 10) Participates in project planning meetings to share their knowledge of system options, risk, impact, and costs vs. benefits. In addition, communicate operational requirements and development forecasts.
- 11) Tests code, processes, and deployments to identify ways to streamline and minimize errors.
- 12) Uses configuration management software to automatically deploy updates and fixes into the production environment.
- 13) Performs routine application maintenance to ensure the production environment runs smoothly. Develops maintenance requirements and procedures.
- 14) Any other deliverable based on the task assigned to the DevOps Engineer by the Competent Authority.

## **Terms of Reference of Associate for OOSC/IE Component**

### **Background**

The Government of the Punjab developed the Education Sector Plan in 2019 and for the implementation of this plan, a grant was provided by the Global Partnership for Education (GPE). This grant is being implemented under the 'Transformation in Access, Learning, Equity and Education Management (TALEEM)' Programme with the assistance of UNICEF as Grant Agent. The Taleem Programme will focus on key thematic areas across the education sector. Under the programme, PMIU-PESRP is the project Secretariat and a Taleem Cell is established at PMIU-PESRP to implement the activities. Given the diverse areas of implementation of the programme, a robust Monitoring & Evaluation framework is required to ensure quality of service delivery and to maintain the timelines and enable smooth implementation of the programme. To assist the Programme Officer for OOSC/IE in the execution of these activities, an associate is to be hired under the Taleem Cell.

### **TERMS OF REFERENCE**

He/She will work in close coordination with the relevant teams under the Taleem Cell and will report to Programme Officer OOSC/IE. The key activities will be to assist the Programme Officer OOSC/IE in designing the framework for the activities and the subsequent implementation, monitoring and evaluation plans for the successful conduction of tasks related to the OOSC/IE component. He/She will be working in close coordination with the M&E teams in the field to establish reporting protocols for progress on the OOSC/IE component. He/She will assist the Programme Officer in developing quarterly budget requests, target reporting lines and field monitoring reports. Additionally, the Associate OOSC/IE will carry a strong engagement with the district field formations of the School Education Department, Literacy and Non-formal Basic Education Department, Special Education Department and the Taleem Cell communications team.

### **Scope of functions**

1. Provide assistance to the Programme Officer OOSC/IE Component in the execution of the component activities prescribed in the Programme Document.
2. Assist in data analysis to identify the target schools/areas/students in the 12 districts under the programme for OOSC section and Multan and Jhelum under the IE section.
3. Prepare a field mobilization plan for the data validation of schools/areas/students identified.
4. Work in close coordination with M&E team to develop a progress reporting framework for on-ground data collection.
5. Work in close coordination with M&E team to conduct field units to prescribed schools/areas for the validation of data collected by M&E team.
6. Assist relevant teams from QAED in the conduction of training planned under the OOSC Component.
7. Prepare quarterly budget requests as per the ICE/FACE Documents under UNICEF's HACT Financial Guidelines, as required.
8. Identify roadblocks to execution in a timely manner as per the on-ground situation in light of periodic field visits.

9. Assist the Programme Officer OOSC/IE in proactively resolving any identified issues in component execution.
10. Record and maintain any documentation with regards to OOSC/IE Component in the Taleem Cell.
11. Work in close coordination with other LNFBE and SpEd to develop and maintain any linkages between their respective segments of the components and SEDs segments.
12. Assist the communications team in developing the framework for community engagement and create linkages between components.
13. Assist the communications team in community mobilization to raise awareness of the Taleem Programme.
14. Any other task as required by the lead.