



DIGITAL MALAWI ACCELERATION PROJECT

PROJECT NUMBER: P505095

GRANT NUMBER: IDA-E338-MW

TERMS OF REFERENCE (TORS) FOR DATA CENTRE CLOUD ARCHITECT

1. Background

Information and Communication Technology (ICT) is now globally recognized as an essential tool in promoting competitiveness, job creation, sustainable development, and overall poverty reduction. A combination of widespread access to broadband and a robust ICT services ecosystem can offer a powerful platform for reducing poverty, improving human development and increasing government transparency and efficiency. ICTs have the potential to transform business and government - driving entrepreneurship, innovation and economic growth and breaking down barriers of distance and cost in the delivery of services.

In recognition of the critical role that ICTs plays in fostering socio-economic development and empowering the poor, the Government of Malawi secured a loan from the World Bank to implement an ICT Project, the Digital Malawi Acceleration Project (DMAP). The line Ministry and owner of the Project is the Ministry of Information and Digitalization (MoID) whereas the lead implementation agency for the project is the Public Private Partnership Commission (PPPC). Other stakeholders include Ministry of Education, MAREN, the National Registration Bureau, the Malawi Communications Regulatory Authority (MACRA) and others.

2. The Digital Malawi Acceleration Project

The US \$150 Million Project comprises the following components:

Component 1: Affordable broadband and secure data hosting. This component will cover rural connectivity that will expand broadband coverage in rural areas with the aim of achieving universal coverage of mobile broadband, connecting at least 500 public sector sites in addition to the at least 530 sites connected through the previous Digital Malawi Foundations Project. Provision of at connectivity services to at least 2,000 schools throughout the country. Being a regional Project, regional connectivity initiatives will be used to address gaps in missing cross-border broadband links, possibly drawing upon a regional financing facility. Finally, it will include integrated infrastructure planning of 'digital corridors' for Southern Africa.

Component 2: Interoperable and secure data platforms. This component will cover the Next Generation Digital ID and identity verification services, including electronic Know Your Customer

(eKYC) and Public Key Infrastructure (PKI) (because of the requirement to develop e-Signatures capability for public e-services that require a higher level of assurance). In order to reach all citizenry, the *Bomalathu* data exchange platform for Government will be expanded. The platform faces both Government agencies as well as other players in the private sector, including financial institutions, and the general public. The Component will also seek to enhance policy and regulatory frameworks, operationalization of the Data Protection Authority and support for the MCERT at MACRA.

Component 3: High impact digital services and productive digital usage. This will cover the Digital skills and digital literacy which was started by Digital Malawi Project benefiting over 19,000 beneficiaries, and it is now planned to expand. Participation in regional program on device affordability will also be a major activity in this component. This device affordability program will be complemented by an e-waste initiative that promotes recycling and resale or safe disposal of laptops and phones. This will be carried out in conjunction with the tech hubs, with a focus on skills development and job creation for young people and persons with disabilities (PWD). Finally, it will also look at the Sectoral deep dives: social protection, disaster and emergency response, financial inclusion, and lands management.

Component 4: Project management. This component will cover the establishment of Malawi Information Technology Authority (MITA) by providing funding for the establishment and operationalization of the proposed authority. The Component will also fund the DMAP management and coordination unit that includes procurement, financial management and social and environment standards.

3. Aim of the Assignment

To strengthen the capacity for the Department of e-government. The project wishes to recruit a Data Centre Cloud Architect as part of the project support personnel. This position will be tenable at the National Data Centre in Lilongwe.

4. Objectives of the Assignment

Data Centre Cloud Architect, with the support of the Data Centre Manager, will carry out assigned duties and tasks with complete compliance with the best practice.

5. Job Summary:

The Data Centre Cloud Architect shall be responsible for designing, planning, and implementing cloud solutions within our data centre environment. This role requires deep knowledge of cloud architecture, data centre infrastructure, and best practices for integrating cloud services with on-premise systems. The ideal candidate will have extensive experience with various cloud platforms, including AWS, Azure, and Google Cloud, and will be able to lead the development of cloud strategies that align with the business goals needs of Malawi government.

6. Key Responsibilities:

- Cloud Architecture Design: Develop and design scalable, secure, and resilient cloud architectures that integrate with on-premise data centre infrastructure.
- Infrastructure Management: Oversee the deployment, management, and operation of cloud-based and on-premise data centre infrastructure.
- Cloud Strategy Development: Collaborate with stakeholders to define cloud strategies that align with business objectives and provide cost-effective solutions to various MDAs
- Security & Compliance: Ensure that cloud solutions adhere to industry standards, regulatory requirements, and best practices for security and data protection.

- Automation & Optimization: Implement automation solutions for cloud and data centre operations to increase efficiency and reduce operational costs.
- Disaster Recovery Planning: Design and implement disaster recovery strategies and solutions that ensure business continuity.
- Performance Monitoring: Monitor cloud and data centre performance, identifying and resolving any issues to maintain optimal operations.
- Vendor Management: Manage relationships with cloud service providers and other third-party vendors, ensuring service level agreements (SLAs) are met.
- Technical Leadership: Provide technical leadership and mentorship to other team members, fostering a culture of continuous learning and innovation.
- Documentation: Maintain comprehensive documentation of cloud architectures, processes, and procedures.

7. Required Qualifications:

- Education: Bachelor's degree in Computer Science, Information Technology, or a related field. Master's degree is not required but an added advantage.
- Experience: 5+ years of experience in cloud architecture, with at least 2 years in a data centre environment.
- Relevant certifications such as AWS Certified Solutions Architect, Microsoft Certified: Azure Solutions Architect Expert, or Google Professional Cloud Architect will be an added advantage.
- Experience with hybrid cloud environments, cloud security practices and tools, including identity and access management, encryption, and firewalls.

8. Technical Skills:

- Strong understanding of data centre technologies, including servers, storage, networking, and virtualization.
- Proficiency in infrastructure-as-a service.
- Familiarity with containerization and orchestration technologies such as Docker and Kubernetes.
- Knowledge of disaster recovery and business continuity planning.

9. Competencies:

- Familiarity with DevOps practices.
- Strong project management and technical team management skills.
- Excellent problem-solving abilities and attention to detail.
- Strong communication skills, with the ability to explain complex technical concepts to non-technical stakeholders.

10. Duration of the Contract

The Data Centre Cloud Architects will be recruited for a period of three (3) years renewable annually with the possibility of extending the contract subject to satisfactory performance. This is a full-time position tenable at the Department of e-Government in Lilongwe. The performance will be measured based on timely submission and quality of all deliverables, advancement of the respective activities, and the feedback from management and technical team members at the e-Government Department focused on technical competency, professionalism, responsiveness, and teamwork.

11. Deliverables

The Data Centre Cloud Architect will be required to submit ad hoc and monthly reports covering his/her activities which will go into a common report.

12. Remuneration and Other Benefits

A competitive salary package will be negotiated based on qualifications, knowledge and experience and in line with the Ministry of Finance Salaries Circular No.: FIN/DAD/RM/5/4/2 of 2023 Salaries for Staff Working in Donor Funded Projects.

13. Contractual Provisions

The Data Centre Cloud Architect will work under conditions as stipulated in his/her Consultancy Contract which will be guided by the Laws of Malawi in line with World Bank Regulations and Statutes and PPPC conditions of service.

14. Selection

The applicant will be selected on the basis of the approved methods of selecting individual consultants in accordance with the World Bank's "Procurement Regulations for IPF Borrowers" (Procurement Regulations) dated February 2025, and the "Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants", dated October 15, 2006 and revised in January 2011 and as of July 1, 2016, and other provisions stipulated in the Financing Agreements.

15. Reporting

The Consultant will work under the direct supervision of The Director, Department of e-Government through the Data Centre Manager for all activities in this activity. However, the legal contract holder shall be the Chief Executive Officer of the Public Private Partnership Commission. The address for whom is as follows:

The Chief Executive Officer
Public Private Partnership Commission
P.O. Box 937
Blantyre.
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