



THE DIGITAL MALAWI PROGRAM PHASE I: DIGITAL FOUNDATIONS PROJECT

CREDIT NUMBER: 60500MW

Purchaser: The Public Private Partnership Commission
Project: Digital Malawi Program Phase I: Digital foundations Project
Contract title: Design, Installation and Commissioning of a data Centre in Malawi
Country: Malawi

Responses to the Queries - 2

No.	Document Location (Screenshot or page index)	Questions	Answer
1		<p>The demand of the bid is for a hybrid cloud platform that provides the basic computing, storage resources and convenient cloud services, as well as simple operation and maintenance.</p> <p>The vendor’s solution can provide a full-stack cloud platform (including hardware and cloud software), industry-leading cloud service capabilities, and can provide cloud services on demand (IAAS PAAS SAAS), unified operation and maintenance services, remote vendor agency operation and maintenance services and can ensure safety, it could simplify the client’s operation and maintenance obstacles, so that customers can focus more on business.</p> <p>Will this Alternative solution which can meet your eventual</p>	<p>Bidders are advised to stick to Bid Technical Requirement based on scope of assignment If alternative solution is provided it will be evaluated based on scope of the assignment</p>

		business operation requirements be acceptable to you or not?	
2	Page112 1.3.1.2 Security Architecture . Authenticated Facility Access . Surveillance Cameras . Visitor Management System . Firewall and Intrusion Detection . Off-Site Media Storage . Disaster Recovery . Environmental Management	About the Authenticated Facility Access/Surveillance Cameras, is it for the data center or the entire campus? What is the specific scope?	Bidders are advised to refer to 2.1.1, 1.2.1.4 and 5.4
3	Page 112 1.3.1.2 Security Architecture Visitor Management System:	Does the system require a personnel access control system, including a card issuing system, cards, etc.? Does the system require a vehicle access control system, including vehicle access cards, Barrier Pole, etc.,. Could you please give detailed requirements?	Bidders are advised to refer to 2.1.1, 1.2.1.4 and 5.4
4	P112 1.3.1.2 Security Architecture . Authenticated Facility Access . Surveillance Cameras . Visitor Management System . Firewall and Intrusion Detection . Off-Site Media Storage . Disaster Recovery . Environmental Management	Does this refer to archive or backup?	This refer to Archives
5	P1121.3.1.2 Security Architecture. Authenticated Facility Access. Surveillance Cameras. Visitor Management System. Firewall and Intrusion Detection. Off-Site Media Storage. Disaster Recovery. Environmental Management	For Disaster Recovery1、 What is the distance between the two data centers?2、 What are the bandwidth and latency of the two data centers?3、 What are the requirements for RTO and RPO?	The Distance is about 323 Km. Dark fiber is between DC and DR site. Bandwidth and Latency depends on vendor solution. Vendors has to account for all auxiliary equipment and technology to connect the two sites

6	<p>P112</p> <p>1.3.1.2_ Service Architecture. The data centre to support professional management of every facet of the data centre, enabling MDAs' to focus on their core mission while Department of eGovernment focuses on the IT Service Management.</p> <ul style="list-style-type: none"> • Virtual Server Hosting • Physical Equipment Hosting • Gigabit Ethernet • High Performance Computing (HPC) • Data Storage 	<p>What are the specifications for HPC? What businesses need to be run in the future?</p>	<p>Bidders are advised that Vendors solution should provide HPC</p>
7	<p>Page115</p> <p>2.1 Data Centre Design Install and Commissioning - Mandatory</p> <p>2.1.1.6 Supply and installation of redundant UPS Power Supply System with Environmentally Friendly Redundant power system with 72-hour autonomy power backup.</p>	<p>Does the 72-hour requirement apply to the diesel generator or battery? For Tier III, the D.G. backup design is required, and the backup time of the D.G. is not less than 12 hours.</p>	<p>How power can be maintained when there is outage from ESCOM</p>
8	<p>Page 116</p> <p>2.3.1 The Supplier MUST perform the following Integration Services</p> <p>2.3.1.1 Integration with Enterprise Service Bus and other components of the MEAIF to be deployed by the digital Malawi</p> <p>2.3.1.2 Integration with Government Wide Area Network (GWAN) and Malawi Internet Exchange (MIX)</p>	<p>1. What are the existing systems? How to connect?</p>	<p>There is no Existing system. Presently GWAN provide connectivity to MDAs and other Government organizations</p>
9	<p>Page 116</p> <p>2.3.1 The Supplier MUST perform the following Integration Services</p> <p>2.3.1.1 Integration with Enterprise Service Bus and other components of the MEAIF to be deployed by the digital Malawi</p> <p>2.3.1.2 Integration with Government Wide Area Network (GWAN) and Malawi Internet Exchange (MIX)</p>	<p>1. Does this clause have a requirement for bandwidth, and if so, please give a value for bandwidth. Such as 10GE or GE port connecting to the GWAN</p>	<p>No. Consult GWAN</p>
10	<p>Page 116</p> <p>2.4 Training and Training Materials – Mandatory</p> <p>2.4.1 The Supplier MUST provide the following Training Services and Materials.</p> <p>2.4.1.1 User: MDAs with systems to be hosted in the data centre</p> <p>2.4.1.2 Technical: ICT Common Service personnel and eGov.</p> <p>a) Training for 5 technical staff in OEM training facility.</p> <p>b) Providing onsite technical support to eGov. technical staff for twenty-four (24) months from the date of commissioning</p>	<p>Can training be help onsite or have to be in OEM's training facility?</p>	<p>Training plan should be provided for both OEM training facility and the established bidder Malawi facility</p>

11	<p>Page 116</p> <p>2.4 Training and Training Materials – Mandatory</p> <p>2.4.1 The Supplier MUST provide the following Training Services and Materials.</p> <p>2.4.1.1 User: MDAs with systems to be hosted in the data centre</p> <p>2.4.1.2 Technical: ICT Common Service personnel and eGov.</p> <p>a) Training for 5 technical staff in OEM training facility.</p> <p>b) Providing onsite technical support to eGov. technical staff for twenty-four (24) months from the date of commissioning</p>	<p>Is there any more requirement for onsite technical support? Like SLA, OEM technicians need to work onsite, faulty parts are not allowed to return back to OEM's local warehouse etc.</p>	<p>Bidders are advised to refer to 3.5.41</p>
12	<p>Page 116</p> <p>2.5 Data Conversion and Migration – Mandatory</p> <p>2.5.1 The Supplier MUST provide services and tools to perform the following Data Conversion and Migration Services: Early adopter MDAs requiring to migrate Information Systems to the data Centre.</p>	<p>What systems and data need to be migrated? What are these systems currently deployed on? Such as the corresponding physical server, virtualization, storage?</p>	<p>Legacy system apps presently running at isolated servers at MDAs and other Government organizations. These have to be migrated to the Data Center</p>
13	<p>Page 116</p> <p>2.6 Documentation Requirements – Mandatory</p> <p>2.6.1 The Supplier MUST prepare and provide the following Documentation.</p> <p>2.6.1.1 End-User Documents: Detailing how MDAs can have their systems hosted and accessed</p> <p>2.6.1.2 Technical Documents: Operation and maintenance and standard operation procedures for the data centre</p>	<p>Is there any existing template for documentation requirement to follow? If the answer is yes, please provide template.</p>	<p>There is no existing template</p>
14	<p>Page 117</p> <p>2.7.1.7 Safeguard Specialist: Bachelor of Science degree in Environmental Management or Social Studies. Master's degree in related field is an added advantage. 3-5 years' experience in Environmental and Social Management implementation for World Bank funded projects. Knowledge and experience in social impacts assessment and health and safety management.</p>	<p>Is there any reason to set this role in supplier's technician team?</p>	<p>Yes</p>
15	<p>Page 119</p> <p>3.1.6 "The proposed appliance must combine virtualization, compute, storage, management, and data protection with a single point of support for the hardware and software. "</p>	<p>what is "data protection with a single point" refer to?</p>	<p>Management software should provide monitoring for both hardware and software</p>

16	<p>Page 120</p> <p>3.1.25 "Solution must have 14/20Core (2.2GHz) CPU single socket, 384GB ram and 3x 3.84 TB SSD per node, 1.6TB cache SSD. "</p>	<p>Must 3x 3.84 TB SSD per node be required? Or the total capacity meets the requirement is also fine.</p>	<p>Bidders are advised to stick to Bid Technical Requirement</p>
17	<p>Page 120</p> <p>3.1.26 "HCI Nodes should be able to scale to 24 drives per appliance"</p>	<p>How to understand "24 drives"? Is that mean able to scale to 24 nodes or scale to 24 disks in one node.</p>	<p>24 disks per node</p>
18	<p>Page 120</p> <p>3.1.27 "Solution must include hypervisor Enterprise Plus License for all nodes."</p>	<p>What is "Enterprise Plus License"?</p>	<p>All license associated with your solution both software and hardware</p>
19	<p>Page 120</p> <p>3.2.4 "Built-in Orchestration and Automation "</p>	<p>Can be more specific about Orchestration and Automation?</p>	<p>With Less Human intervention and managing large virtual complex distributed systems and services</p>
20	<p>P121</p> <p>3.3 HCI Storage</p> <p>3.3.1 Virtual SAN, Server SAN connected to all nodes.</p> <p>3.3.2 Disk Drives provided must be All Flash</p> <p>3.3.3 Delivering efficient deduplication, compression, and erasure coding capabilities.</p> <p>3.3.4 Ability to define different VM virtual/physical disk protection levels (RAID-5, RAID-6, RAID-10, or equivalent)</p>	<p>What is the available storage capacity?</p>	<p>Depends on Vendors Solution</p>
21	<p>Page 126</p> <p>3.8 Rack and Accessories</p> <p>3.8.1 42U Enclosure</p>	<p>The number and power consumption of IT RACKs are not found in the bidding document. Is the design based on the existing data center?</p>	<p>Has no idea of Vendors solution and how many racks solution will require. Equipment consumption etc Refer to 5.4</p>
22	<p>Page 126</p> <p>4.1 Inspections</p> <p>4.1.1 Factory Inspections: Provisions for Project team to inspect, test and simulate data centre and ancillary equipment prior to their shipment to the site(s).</p> <p>4.1.2 Inspections following delivery: Provisions and methods for inspection to be employed by the Project Team upon delivery and unpacking of the data centre and ancillary equipment to the Site(s).</p>	<p>Is there any more requirement regarding to factory inspections, like process, proofs or documents, environment etc. need to be provided?</p>	<p>Original document from OEM</p>

23	<p>Page 128</p> <p>5.1 Warranty Defect Repair – Mandatory</p> <p>5.1.1 The Supplier MUST provide the following services under the Contract.</p> <p>5.1.1.1 <u>Warranty Defect Repair Service: 3 years coverage period; response time and problem-resolution performance standards; modes of service, such as on-site, on-call, or return to warehouse</u></p> <p>a) repair or replace goods (or part of them)</p> <p>b) resupply or fix a problem with services (or part of them)</p>	Is there any requirements regarding to warranty services?	Authorized authenticated warranty service guarantee by OEM or 3rd Party manufacturer
24	<p>Page270</p> <p>2. SCOPE OF WORKS FOR THE DATA CENTRE</p> <p>Supply and installation of redundant UPS Power Supply System with solar power backup.</p> <ul style="list-style-type: none"> Supply and installation of redundant UPS Power Supply System with solar power backup. 	<p>Does the solar power supply serve as a supplement to the power supply or a pure backup power supply? The main reason is that the power consumption of data centers is large. If solar power is used as backup power, solar panels will be deployed in a large area. In addition, solar power is affected by the weather and cannot provide stable energy. In normal data center designs, solar power is rarely used as a backup power source. Generally, the mains grid+D.G+UPS (including batteries) mode is used.</p>	<p>Back up power should be supplied by System Generator. The capacity in KVA depends on vendor solution power consumption and other Data center equipment usage. Refer to 2.1.1, 1.2.1.4 and 5.4 Allowance of 20% or 30% can be added due to future scalability of the Data Center</p>
25	The bidding document does not contain the data center layout and structure diagram, which cannot support L1 infrastructure design.	Please provide the data center layout drawing.	The link to layout drawings is at the PPPC website
26	page no-119, section 3.1.3 Solution must be able to integrate and fully upload hypervisor vSAN,vCenter, and vRealize Log Insight into the core licensing bundle on the system.	The complete solution stack based on Dell Hardware and Vmware Softwares (Single OEM solution). It is limiting other Leading OEMs and technology solution to participate. For level playing field - Shall we provide equivalent technology where which will meet the functional requirements.	
27	page no-119, section 3.1.6 The proposed appliance must combine virtualization, compute, storage, management and data protection with a single point of support for the hardware and software.		We did not mention VxRail which is Dell/EMC HCI solution.
28	page no-119, section 3.1.7		The Detailed Scope Technical Requirement is NON-Vendor

	The Hyper-Converged Software must be based on proven virtualization technology leveraging for both software defined compute and storage.		
29	page no-120, section 3.1.27 Solution must include hypervisor Enterprise Plus License for all nodes.		specific. Vendors proposal will be evaluated based on solution
30	page no-122, section 3.5.17 Must Support backup of Enterprise systems, end User Desktops and replication of Virtual Machines with global deduplication across all		They proposed that meets the technical requirements
31	page no-125, section 3.7.4 Licenses: DD Boost, CIFS & NFS, Retention lock, Replication, Encryption		Solution can be Cisco, HP, VMWare, Dell/EMC, Nutanix etc.HCI
32	page no:112 1.3.1.2 Security Architecture Firewall and Intrusion Detection	Firewall specification not mentioned, Does not have any specification related to other security components like anti-virus, Anti-APT, ddos, LLB, SIEM.	Security either software/hardware depends on Vendors solution
33	Page No 113 1.4 Network Opreation Center	NOC requires NMS/EMS software solution to monitor, manage - entire DC components, applications, OS, services. These software solution is having multiple modules like monitoring, helpdesk system, Asset Management, performance mgmt etc. costing will be decided based on modules, no of devices, os and services etc. for Level playing field it is required to mention functional and no of node/os/services etc, So pls mention the license requirement along with quantity.	NOC Hardware/software Licenses and renewal process to be
34	page No 121 3.4 Software Defined Network	The Functionality requirement asked for the SDN, kindly clarify do we need to provide the components to achive SDN from DAY 1 or the Proposed solutions should be SDN Capable for future integration	detailed in Vendors proposal. (HCI is a SD unified system)
35	page No 121 3.5 Software Defined Network	As per the document two numbers of 48 Port Aggregation switches are asked , kindly clarify weather this will act as the spine switch for the DC	As stated they are ethernet aggregation switch not spine switch

36	Page No. 268 Scope of Work for Data Center	Kindly confirm whether Solar power needs to be designed for entire Data Center load or only for IT load	Solar to support DC lighting in erms of power outage
37	Page No. 269 Scope of Work for Data Center	Kindly confirm the scope of supply and installation of utility power, transformers and DG set for Data Center	Transformer will be provided by ESCOM. Sys Gen for DC capacity
38	Page No. 270 Scope of Work for Data Center	Kindly clarify the scope of work for completion of Data Center building structural works, outer periphery walls,	to be calculated by vendor based on power consumption of their solution
39	Page No. 271 Scope of Work for Data Center	Kindly confirm the load bearing capacity of Data Center Building slab. As per TIA-942 standards, Data Center slab shall have 1500kgs per SqM load bearing capacity	Refer to 1.2.1.4 of RFB
40	Page No. 272 Scope of Work for Data Center	Kindly confirm the Tier level required for the Data Center	Refer to 1.2.1.4, and 5.4
41	Page No. 273 Scope of Work for Data Center	Does the Data Center needs to certified by an Data Center body. If yes, kindly specify the level of certification and the certifying body	Refer to 1.2.1.4 of RFB
42	Page No. 274 Scope of Work for Data Center	Kindly provide the AutoCAD drawing for Data Center and DR center buildings	Link to drawings at PPPC website
43	Page No. 275 Scope of Work for Data Center	Kindly specify the type of cooling required for Data Center and DR center. - DX or Chiller based	Refer to 1.2.1.4 and 5.4 of RFB
44	Page No. 276 Scope of Work for Data Center	Kindly provide the technical specifications for all the components of Data Center	Depends on Vendors solution
45		<u>Sites</u> : We would like to know the areas where you would like to have the data centers built (<i>a visit would be ideal</i>)	In Lilongwe. Link to Building Layout design is at PPPC website
46		Rooms: dimensions	Link to Building Layout design is at PPPC website
47		Racks: how many of them do you expect to be accommodated in each of the data centre	Depends on Vendor Solution

48		Power: any estimation of power consumption per rack	Depends on vendors solution
49		Would the data centers require two independent ESCOM power lines on each site?	NO
50		<u>Word doc of the bid document</u> : please share us a copy for easy use of the inserted tables.	Convert your PDF download to word