



JAMAICA: FOUNDATIONS FOR COMPETITIVENESS AND GROWTH PROJECT

Loan No.:8408-JM

Assignment Title: *Supply and Installation of Hardware for the National Land Agency Automation (AMANDA)* Reference No.: FCG/SUP/011

CLARIFICATION N° 1 – November 29, 2019

Question 1: In Lot 2 for the servers, there is a request for the following: “2 x SAS 12 Gbps HBA external controllers, LP Adapter or better”, however there is also a request for the following: “2 or more 10 GB SFP+”. Please confirm if the SAN is expected to be directly connected to the 2 servers via SAS or SFP+ 10GB iSCSI ports.

Answer: The Server and SAN must be equipped with both options as the servers will be directly connected to the SAN via the SAS adapters initially. In the future, the interconnection will be accomplished via the network using the 10GB iSCSI ports as the network is enhanced.

Question 2: Please confirm how many 10GB SFP iSCSI ports are required for each server.

Answer: A minimum of two 10GB SFP iSCSI ports are required for redundancy.

Question 3: If the servers will form a cluster, please state what the external SAS HBA will be used for.

Answer: Please see the answer to question 1.

Question 4: Please clarify the following requirement “Minimum 4 (inclusive of one hot spare)”. Is the hot spare counted in the quantity 4 drives or should we provide 5 drives?

Answer: The hot spare is included in the quantity of four hard drives.

Question 5: In Lot 2, there is a request for extra-long power cables for both the SAN and servers. Please confirm if the equipment will be placed in a rack with available internal PDU sockets or will they be placed in an area far from PDU socket access. If within a rack with internally available PDU sockets, will you accept regular length cables long enough to access the internal PDU sockets?

Answer: The servers and SAN will be installed in a server rack with a recently installed rack-mountable Power Strip connected to the UPS. The length of the cable should be a minimum of 10ft.

Question 6: In Lot 3, you have requested a SAN with 10k RPM HDDs and some SSDs. Will the NLA accept a newer type of SAN with technology that does not depend on high disk count or disk RPM speed for performance but instead leverages controller processing power to provide all requested features while also providing additional advanced features not mentioned such as encryption and zero copy clones? For instance in terms of performance, you could start with over 20,000 IOPS with a

combination of 7.2k drives and SSDs. If the entity needs over 200,000 IOPS, the NLA could perform a non-disruptive, simply in place upgrade of the controllers without needing to add more disks and enclosures while still having 7.2k RPM drives installed. Less disks and enclosures mean less upfront and operational costs (e.g. licenses, support and power). Will such a solution be acceptable?

Answer: Lot 3 refers to the Wide Format and High Volume scanners. In reference to Lot 2-1, the National Land Agency will consider SAN technology that meets or exceeds the performance or speed requirement.

Question 7: Please confirm if at least 2x 10GB iSCSI switches are in place or will there be a need to provide for the cluster.

Answer: Please see the answer to question 1.