RFP - Equipment for the Replication of Critical Systems at Bank of Mauritius Tower and at Disaster Recovery Site

06 March 2014

Response to Queries:

(1)   Please specify the number of drives required in the tape library at Main Site. Is it one or two drives?
2 Drives

(2)   It has been mentioned in Section Disaster Recovery Site in the RFP that Tape Library will not be required at the DR site but however backup solution needs to be proposed at the DR site. Please advise whether the BOM already has a tape library at the DR site to be used? If yes, please specify make and model.
There is no tape library at DR Site

(3)   Also please advise if a mixture of SAS and Near Line SAS HDDs can be proposed for the SAN Storage. Please note that HPFC and FATA disks are old technology disks.
Please quote for i) SAS and Near Line SAS

     ii) HPFC and FATA;

in a 20%-80% ratio and which will also be a good compromise between cost and performance

(4)   Please provide the list of applications that will run on the Blade Servers?
Banking Applications; proprietary to CMA

(5)   Please advise whether applications hosted on the Blade Servers shall also be replicated to the DR Site? Is it Active- Active or Active – Passive?
Data on Live site will be replicated to DR Site in an Active-Active mode. *However replication will be software based and will be catered by CMA.*

(6)   Can you please specify for what purpose will the SAN Storages will be used? Is it for Database or Archiving as well?
Database; mainly with an Archiving component

(7)   Can you please specify the RAW disk space for Archiving if required?
System is used mainly for Database.

(8)   Please specify the RAID level required for the 2 SAN Storages
Raid 5

(9)   Who will configure the core application?
CMA will configure the core application.

(10)   Will the Bank offer a site visit to Bidders to assess the network?
Yes

(11)   I refer to the Section Bidder Support Services. POINT 5: Is the Bank looking for Vendor Certified Training or Training provided by Certified Engineers from SIL coupled with Certificate of Attendance for trainees?
Quote for certified training separately as an optional item. But training/knowledge transfer should be provided free of charge.

(12)   I refer to the Section CONSULTANCY AND SOFTWARE LICENCING COSTS BREAKDOWN Section 1.1.5: Which interface is required between the telephony system and exchange platform? Is the telephony system currently being supported on POE switches? Does the telephony system currently has a management interface? Is the actual telephony system currently supported in the actual Exchange platform.
Not applicable.

(13)   What Database is the bank using and whether the latter has adequate licenses to do a DR / replication of the database.
Oracle Database (11.2.0.4 64 Bit) will be used together with Oracle Golden Gate for Replication

(14)   Are foreign bidders qualified to take part in this tender?
Yes, foreign bidders are qualified to participate in the tender.

(15)   What is the trade term for supplying in accordance with INCOTERMS?
All equipment should be delivered at Bank's premises. All cost to be borne by vendors (CIF and all taxes).

(16)   Who make the customs clearance for equipment and materials in Mauritius if the bidder is the foreign company?
The bidder

(17)   If it is possible to pay foreign qualified bidder in a freely convertible currency such as USD?
Payment may be made in USD but amount quoted in MUR will be converted to appropriate currency at date of payment rate.

(18)   Which core applications and critical data should be protected in disaster recovery site?
All system hosted on those servers at live site.

(19)   Are there any concerns about the data and application recovery time and data recovery point object?
All transition to DR should be seamless with minimal downtime.

(20)   How long is the distance from the primary site to the DR site?
About 13 KM

(21)   Is there any Fiber channel to connect from the primary to the DR site, what's the bandwidth?
Connection from Live Site to DR Site is currently via wireless at approximately 20Mbps.

Fibre channel shall be implemented soon between live and DR.

(22)   Which brand physical machine and storage have been adopted on the existing applications?
Currently running on HP but open to all brands for the tender exercise. No brand has been adopted for physical machine and storage. It is vendor independent.

(23)   Which types of data store have been adopted on the existing applications, database (oracle/SQL server,DB2)? Excel? Word documents?
Oracle Database 11.2.0.4 (64 Bit)

(24)   When the disaster happened, the DR center should take over to support the same application for business immediately, or just provide the data for manual recovery.
Immediately, DR centre should take over.

(25)   How long can be accepted for business application interruption and data lose?
As minimal as possible.

(26)   It is mentioned The Operating shall be purchased by the bank but its installation will lie with the supplier. Server's technical tables however shows "RHEL 6" as a requirement. Please confirm if we should supply the OS or will it be provided by the bank?
Supplier will have to provide the OS with support.

(27)   On the production site, should the new chassis be integrated with the existing blade enclosure domain because this will impact on the solution design we propose.
New chassis will be integrated with new blade enclosure.

(28)   Please specify Ethernet connectivity type/ speed (RJ-45/ FC, 1GB/ 10GB)
Vendor to propose

(29)   Does the bank require two additional external SAN switch at BOM Tower?
Depends on solution propose.

(30)   It is mentioned that we need to provide a Blade Server with 8 x 450GB Hard Disk. Kindly note that a typical blade server can only accommodate two Hard Disk Drives. Please confirm if there is a real need to have 8 hard disks on the blade server since the bank will also be purchasing a SAN.
Vendor can alternatively propose two disks with capacity approaching 8x450GB.

(31)   Please clarify regarding FC/ Ethernet adaptors. Does the bank require two FC cards or two FC PORTS; 4-Ethernet 1GB Adaptor or 4- Ethernet 1GB PORTS?
Vendor to propose

(32)   Please clarify on the training to be provided: Do we need to provide for HP Blade Technology, HP Storage Technology and Linux? This is because we are proposing HP blade servers with which the bank IT staff is already familiar.

Training should be provided on HP Blade Technology, HP Storage Technology and Linux

(33)   Please clarify if the statement "Interface will be required between the telephony system with the Exchange platform in place and new network devices with existing ones." is relevant?
Not Applicable

(34)   Please confirm the bandwidth between BOM Tower and DR Site. Furthermore, does the bank wish to have Array based replication (SAN to SAN)? This will require a minimum bandwidth of 30Mbps.
Currently 20Mbps over wireless but a new line will be operational on Fiber Optic @ 50Mbps between BoM and DR.

(35)   It is mentioned that the storage should come with 50TB raw. Does all this storage capacity need to be on SAS hard disks or can it be on a mix of SAS and cheaper SATA hard disks? In the second scenario, the price will of course be cheaper. Should the bank decide for the mix of SAS and SATA hard disks, please specify how much raw capacity on SAS and SATA hard disks.
Please quote for i) SAS and Near Line SAS

       ii) HPFC and FATA;

in a 20%-80% ratio and which will also be a good compromise between cost and performance

(36)   Please refer to page 22 (Data Replication (local and remote)) - Kindly clarify if local or remote replication is preferred. If both local and remote replication are required, this will imply buying a third SAN for BOM tower.
Data on Live site will be replicated to DR Site in an Active-Active mode. However replication will be software based and will be catered by CMA.

(37)   Please give more details on the integration with existing applications/ systems.
CMA applications will have to work with other existing applications for example such as SWIFT over the proposed infrastructure.

(38)   Who will be responsible for the application installation, testing and data integrity before switch- over? Our scope is limited to hardware setup and OS installation.
CMA will be responsible for application installation, testing and data integrity.

(39)   Which components are to be tested under the mock run? Does it consist of hardware components or software/ Data replication/ also. Who will ensure data integrity?
Mock run will be carried out with supplier of banking system to ensure smooth replication.

(40)   Will the bank use its existing backup software with the new environment? The new Tape Library can be integrated with the new backup server thus saving the bank on backup software license.
Vendor to propose.

(41)   It is mentioned that Backup to disk and Backup to tape should be proposed. For Backup to disk, please specify the desired capacity of the disk device.
Vendor to assess and propose. Estimated data growth is approximately 1.5 TB per year.