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

Response to Queries

10 March 2014

(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 the 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 which are proprietary to the Bank's Solution Provider.

(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 Bank's Solution Provider.

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

(7)   Can you please specify the RAW disk space for Archiving if required?
>   None. Please refer to Question 6.

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

(9)   Who will configure the core application?
>   The Bank's Solution Provider shall 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?

Please quote for certified training separately as an optional item. But training/knowledge transfer should be provided free of charge.

(12)   With reference 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?

Telephony system and Exchange platform does not form part of this tender exercise and there not applicable.

(13)   What Database is the Bank using and does it have 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 are 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 will have to do the needful.

(17)   Is it 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 on date of payment.

(18)   Which core applications and critical data should be protected in disaster recovery site?

All systems hosted on those servers at live site should be protected.

(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?

It is About 13 KM

(21)   Is there any Fiber channel to connect from the primary to the DR site? What is the bandwidth?

    The Bank currently has wireless connection of 20 Mbps between the Live and the DR Site. A fibre optic line of 50 Mbps is currently under implementation between the 2 sites.

(22)   Which brand physical machine and storage have been adopted on the existing applications?

    The Bank's systems are currently running on HP but the current RFP is brand neutral.

(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.

    DR centre should take over immediately.

(25)   What time frame can be accepted for business application interruption and data loss?

    The duration of the interruption should be as short as possible with no data loss.

(26)   It is mentioned in the RFP that 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?

    The Vendor 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.

    The new chassis will be integrated with the new blade enclosure.

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

    The Vendor has to propose the appropriate connectivity.

(29)   Does the Bank require two additional external SAN switch at BOM Tower?

    The Vendor has to propose the appropriate solution.

(30)   It is mentioned that the Supplier need to provide a Blade Server with 8 x 450GB Hard Disk. However 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.

    The Vendor can alternatively propose two disks with capacity approaching 8x450GB.

(31)   Please provide clarifications on FC/ Ethernet adaptors. Does the Bank require two FC cards or two FC PORTS; 4-Ethernet 1GB Adaptor or 4- Ethernet 1GB PORTS?

    The Vendor has to propose the appropriate solution.

(32)   Please clarify on the training to be provided. Does the vendor need to provide for HP Blade Technology, HP Storage Technology and Linux?

    The training has to be provided on each component irrespective of the existing solution at the Bank.

(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?
     Please refer to answer to Question no 12.

(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.
     Please refer to answer to Question no 21 for part (a).

     No the Bank does not wish to have an Array based replication[please refer to Question no 5].

(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 refer to answer to Question no 3.

(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.
     Please refer to answer to Question no 5.

(37)   Please give more details on the integration with existing applications/ systems.
     All integration will be carried out by the Bank's Solution Provider.

(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.
     The Bank's Solution Provider shall be responsible for application installation, testing and data integrity and the scope of the Bidder will be limited to what has been defined in the RFP.

(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 Bank's Solution Provider 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.
     The Vendor may propose an appropriate solution with alternatives.

(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.
     The Vendor has to propose appropriate solution. The estimated data growth is approximately 1.5 TB per year.

(42)   Specify the number of Virtual Machines that will be converted to Physical State machines.
> There will be no virtual machine hosted on the server

(43)   Please confirm whether Operating System Licences/Media will not have to be quoted /supplied to the Bank of Mauritius
> Please Refer to Question no 26.

(44)   Specify if any migration of Data will have to be made by the suppliers during the implementation of the project. (If yes, specify Data source and Quantity)
> Please refer to Question no 5.

(45)   Specify if existing EVA4400 SAN Solution will still be in use following implementation of New Storage Solution.
> Yes

(46)   Blade Enclosure – Ethernet Blade Switch / SAN Switch: Specify if the Bank Of Mauritius is agreeable to implementation of Virtual Connect Technology Switching
> Yes

(47)   Adapters Ethernet / 4 x 1GB Ethernet Adapters: Specify if Physical 4 x 1GB Adapters needed or splitting of 1 Adapter into 4+ Virtual Adapters allowed.
> 4 x 1 GB Ethernet Adapter (Physical)

(48)   Adapters FC / 2 x 8GB FC Adapters: Specify if 2 separate 8GB FC Adapters needed or 1 DUAL port 8GB FC Adapter is allowed
> 2 separate 8GB FC Adapters.

(49)   8 x 450GB HDD needed – Specify if number of HDD at 8 is correct
> Please refer to Question no 30.

(50)   No FC and no Ethernet adapters requested for this Blade (8 x 450GB HDD) – Specify if this is correct
> Please refer to Question no 31.

(51)   Console Server Adapters Ethernet – Please specify Speed of adapter requested.
> The Vendor has to propose.

(52)   Specify if Backup Server is available for Backup to Disk solution, or bidder should propose such a device.
> The Bidder has to propose such a device.

(53)   Please specify the existing applications and systems and the level of integration required.
> Proprietary Banking applications which will be installed by the Bank's Solution Provider.

(54)   Please provide us with the details of accepted downtime per application.
> Please refer to Question no 25

(55)   What is the useable capacity required from 50TB and please specify RAID levels to be implemented?
Useable: 70%. For RAID level please refer to Question no 8.

(56)   What is the expected performance (IOPS, latency) in terms of the new setup?
The Server will host transactional systems and the Vendor is expected to propose an appropriate solution.

(57)   What is the current workload generated by the applications in the current setup?
This information is not available

(58)   In terms of investment protection what should be maximum no of drives to be supported by the array?
The Vendor has to propose an appropriate solution.

(59)   What are the Host connectivity ports required on the storage (FC, iSCSI, FCoE, etc) and the number required for each?
The Vendor has to propose an appropriate solution.

(60)   What is current workload generated by the applications in the current setup?
Please refer to Question no 57.

(61)   How is the primary site connected to secondary site is it via dedicated fiber or WAN link? If it is via WAN link, what is bandwidth between the sites and the latency of the link?
Please refer to Question no 21

(62)   What is expected RPO and RTO from replication perspective?
This will be taken care by the Bank's solution Provider.

(63)   Would you also require backup software for the new infrastructure?
Please refer to Question no 40.

(64)   Could the Bank clarify on the retention period for the datasets?
2 weeks for daily backups. Monthly tape backups are kept permanently.

(65)   What is the current backup window and the expected backup windows?
Full back up: once per week lasting about 10 hours

Incremental backup: daily lasting about 2 hours

Expected: Less than above

(66)   What is the size of the data to be backed up?
The current database size is about 3 TB and data growth is expected at 1 TB per year.

(67)   Specifications of Blade Server IV, page 24, has no FC ports, no Ethernet Ports and requires 8 x 450GB drives. Is this correct?
Please refer to Question No 31.

(68)   Will new storage replace the EVA 4400 or will the EVA 4400 continue to be in use?

Please refer to Question no 45.