

PROVISION OF DATA CENTRE STORAGE SUBSYSTEMS

URGENT

**PLEASE FORWARD THIS DOCUMENT TO
WHOEVER IS IN POSSESSION OF THE
REQUEST FOR PROPOSAL**

ISSUED: August 9, 2010
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**THIS ADDENDUM SHALL BE INCORPORATED
INTO THE REQUEST FOR PROPOSAL AND
SHALL FORM A PART OF THE CONTRACT
DOCUMENTS**

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Please note the following and attached changes, corrections, additions, deletions, information and/or instructions in connection with the Request for Proposal, and be governed accordingly. Failure to acknowledge receipt of this Addendum in Paragraph 9 of Form A: Proposal may render your Proposal non-responsive.

PART E – SPECIFICATIONS

Add: E1.2

E1.2 Appendix A and Appendix B have been provided for information only.

Questions and Answers from Bidders Conference held on August 4, 2010

Q1 What are the current firmware levels on the fibre channel switches?

A1 We have four Brocade 4700 switches running the following firmware: 08.00.012, 09.02.011, 09.02.008, and 09.02.011. We have six Brocade 8 Gb SAN Switches for HP BladeSystem C: class all at firmware level 6.2.1.b.

Q2 Should bidders include additional switches/ports to access storage solutions?

A2 Bidders should include all required elements for the proposed solution to meet the stated requirements. If there are additional costs that may be involved with the proposed solution they should be identified as per B14.11(g).

Q3 What should discounted prices be in relation to - is it a discount compared to manufacturer's list or rather a discount compared to the normal street prices?

A3 All stated discounts should be in relation to a publicly available index as per B14.7 and B14.8. For example it might be a government list price or manufacturer's list price.

Q4 Is the AS400 a legacy system and how much integration of functionality do you require on that platform?

A4 The AS400 environment is currently being used by one business unit and its use is expected to continue. We would like to use all storage functionality on all of our platforms if possible.

Q5 What are the current hardware and software levels in the AS400 environment?

A5 We have two IBM iseries model 520 and one IBM iseries model 515. All are at operating system level 6.1.

Q6 Is the existing legacy storage attached to the AS400 storage?

A6 No. The AS400 is not currently connected to our HDS Storage subsystems.

Q7 What are your plans/desires in regards to replication to the secondary site? Are there any plans for synchronous replication? What other IP traffic occurs between the sites?

A7 We are interested in as many replication features as can be affordably achieved, including synchronous replication. We currently have servers at our secondary site which use the existing TCP/IP network for normal traffic. We also run backups over the network to the secondary site. As stated in B9.2 we have additional dark fibre strands that are reserved for storage use.

Q8 Could the additional fibre referenced in B9.2 be used for things like synchronous replication?

A8 As stated in B9.2 we have additional dark fibre strands that are reserved for storage use that could include synchronous replication.

Q9 Are we interested in having storage functionality integrated into our existing storage subsystems?

A9 We are interested in having this integration if it can be achieved in an affordable manner. Guidance has been provided in B9.8 on the predicted retirement of our existing storage systems.

Q10 Is the requested capacity new storage space or replacement of existing storage?

A10 Both the initial configuration and the additional configuration are a combination of new space requirements and replacement of existing storage systems. Guidance has been provided in B9.8 on the predicted retirement of our existing storage systems.

Q11 So the future space is replacing the old and allowing for growth?

A11 The additional configuration space accounts for replacing the old storage subsystems and growth. Note that future growth includes growth from the server consolidation project where we are taking on new systems that are not part of our storage environment today.

Q12 Do you have a view as to how many physical and virtual servers will be supported by the initial purchase?

A12 B9.1 provides information on current and future server quantities and the nature of the server workloads.

Q13 Will all of these servers be attached to the new storage systems?

A13 As per B9.1 everything in our environment uses our enterprise storage with SAN booting unless there is a physical or technical reason why we can't.

Q14 What consolidation ratios are you running in your VMware ESX environment? Are you booting the ESX hosts from SAN or are you using local disk?

A14 Virtual guest ratios fluctuate over time and we currently have 10-20 virtual guests per physical host. Note that we are currently running VMware ESX 4.0. The ESX hosts have no local disk and are booting from SAN.

Q15 Your physical Host environment is your HP Blade environment, correct?

A15 Yes, 90% of our hosts are running on HP Blades today and all future hosts are planned to. We currently have some hosts at our alternate site that are not running on blades but these will be migrated to blades in the near future.

Q16 What applications/services is the AS400 running?

A16 Some of the current applications running on the AS400 are transit scheduling, bus operator payroll, and purchasing (note that all of these applications are limited to one business unit).

Q17 Are you doing any site failover with VMware today?

A17 No. We are not currently making use of VMware Site Recovery Manager. Note that we do currently have VMware hosts at each site.

Q18 What features set/licenses for VMware do you own today?

A18 We are currently licensed for VMware Enterprise. We also run VMware vCenter Server.

Q19 What are your primary virtual applications?

A19 We will virtualize anything that can be virtualized. As an example, our ERP has been virtualized with the exception of the data base environment and that is now planned.

Q20 Are there any environments you do not virtualize?

A20 All computing workloads are considered as candidates for virtualization and are only excluded from virtualization if there is a clearly understood issue preventing virtualization (eg: vendor support, technical/physical limitations or licensing). As stated in B9.1 we expect to increase our virtualized workload which is currently around 75%.

Q21 What database environments do you use?

A21 Our current environment is approximately 50-50 Oracle 10g (Standard Edition) and SQL Server (Standard Edition). DB2 will be added to the environment within the next year through the server consolidation initiative.

Q22 Is Share Point used within the environment and would it use the storage?

A22 We do not have an enterprise deployment of Share Point but it is used by a range of business units. Our Share Point environments would make use of the proposed storage.

Q23 Are your database environments virtualized?

A23 Only a small portion of the current database environments are currently virtualized but most are expected to be virtualized within one year.

Q24 Are we interested in integration of storage features into applications (like Databases)?

A24 We are interested in having a storage solution that provides storage functionality to meet our business requirements that includes appropriate integration into applications. We are interested in the most advanced storage features that can be affordably obtained. We want to know how any storage functionality will integrate with the software products that we run.

Q25 How should the proposals be structured if there are optional elements?

A25 The initial configuration and additional configuration are lump sum bids where the specific items that make up those prices can be detailed in Table No. 2 – B2 and Table No. 3 – B3. If there are different configurations that you feel would warrant separate consideration, bidders are encouraged to submit additional separate responses detailing those configurations.

Q26 Do you have specific RTO/RPO service level objectives defined?

A26 We do not have specific RTO/RPO requirements. Our high level availability requirements have been identified in B9.4 and we are seeking the best RTO/RPO that can be affordably achieved.

Q27 What backup product is being used?

A27 We are currently using IBM Tivoli Storage Manager 5.5 and anticipate upgrading to 6.2 within one year.

Q28 Is the current backup product a long term direction?

A28 There is currently no initiative underway to replace the current product. We are seeking options to ensure our backup solution optimizes operational capabilities with our storage and virtualization solutions.

Q29 Are we interested in primary de-duplication?

A29 We are interested in the best de-duplication functionality to meet our business requirements that can be affordably obtained.

Q30 Can you provide details of the components of the existing HP Blade Chassis? What modules, etc.?

A30 Our HP Blade Chassis currently consists of:
HP BladeSystem c7000 Blade Enclosure
4 x HP BLc Cisco 1GbE 3020 Switch Opt Kit
2 x Brocade 8 GB SAN Switch
We are currently using the following Blade Servers:
HP BL490c G6 E5540 6G 1P Svr

HP E5540 BL490c G6 Kit

HP ProLiant BL460c Xeon 5450 Server Blade

HP BL-C Xeon 5450 Second processor

Each Blade Server has:

1 x HP BLc NC325m NIC Adapter Option Kit

1 x HP BLc Emulex LPe1105 Fibre Channel Host Bus Adapter