Butler Community College

Request for Proposal for Data Storage, Disaster Recovery and Data Back-up Solution (Converged Infrastructure – Phase 1)

RFPID: DT-CI-STORAGE-ELD-2017

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Submitted Questions and Answers

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03/16/2017

Question:
I would like to get some confirmation on the Storage requirements for the Video and Backup Storage. Just to confirm that both sets of Arrays need to have the controller refresh at 3 years?

Answer:
The controller refresh is requested on both of the ALL FLASH controller arrays.

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03/17/2017

Question:
Confirming that all 5 Arrays (Video and Backup) need to have the controller refresh at 3 years?

Answer:
To clarify the details of the RFP. The primary array's at Site A and Site B are ALL FLASH arrays and need to have the controller refresh at 3 years. The back-up arrays at Site A and Site B as well as the Video Array are hybrid and/or spinning disk arrays and do not require controller refresh.

Question:
It is listed that all Arrays are listed to only be able to take up 4U of space. Is 5U acceptable for any Array?

Answer:
YES 5U is acceptable for any array.

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Submitted Questions and Answers

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03/17/2017 (continued)

Question:
Are there any additional RU's available for Replication units?

Answer:
YES

Question:
Want to get clarification on the use of the term "usable". Does BCCC consider usable the space before or after Storage efficiencies (Dedup/compression)?
EX. Total "usable" space is 60TB but after Dedup/Compression the expected size is 150TB. Or is "usable" 150TB of usable space but after expected efficiencies it would be closer to 375TB of space.

Answer:
Butler Community College's use of the term "usable" or "effective" space refers to the amount of storage after storage efficiencies such as dedup and/or compression. For example total raw space is 60TB and the post RAID capacity is 45 TB, then after Dedup/Compression the guaranteed "usable" size is at least 150TB.

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03/22/2017

Question:
Would you please provide a breakdown of how storage in your environment is allocated in the following categories: File Server, Exchange, Oracle, Sharepoint, SQL server, VDI, Other data? Please include any raw device mapping used in your environment.

Answer:
File Server - 7TB
Exchange - 8TB
Oracle - 5 TB (12 DB over RDM)
Sharepoint - N/A
SQL Server - 3 TB (over 8 RDM connections)
VDI - N/A
Virtual / Physical Server - 28 TB

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Submitted Questions and Answers

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03/27/2017

Question 1 – Can you please verify the current version of VMware that Butler Community College is running?

Answer 1 – Version 5.5

Question 2 – As part of this RFP should new cables for the storage array be included or will these be provided by Butler Community College?

Answer 2 – New cables need to be provided

Question 3 – Please verify the PDU's that are currently being used. Are these standard 110 power or twistlock?

Answer 3 – Standard 110 power

Question 4 – As noted in 4.1 Functional Requirements "The ability to fully integrate with 3rd party backup vendors such as Veeam and CommVault" Should the purchase of a 3rd party backup be included in this proposal?

Answer 4 - Yes

Question 5 – As referenced in 4.1 "Each site must include 5yrs of 4hr support on each array" for all 5 arrays. Please confirm this is the accurate level of support. Would 4 hour of support be needed for "Site A/Site B - active/active all flash arrays and NBD for 3rd Array (video surveillance) as well as Site A/Site B- Backup Storage?

Answer 5 – 4 hr support on all flash arrays (active data) and next business day on video and back-up storage.

Question 6 – As Referenced in 4.1 – For the 3 year controller replacement/swap upgrade on the all Flash Array's will services need to be added for that or with the free training provided would Butler Community College handle the controller replacement?

Answer 6 – Either, but prefer that services be provided

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Submitted Questions and Answers

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03/27/2017 (continued)

Question 7 – Please identify the two physical site addresses

Answer 7 – 901 S. Haverhill Rd El Dorado, KS 67042 & 715 E 13th St, Andover, KS 67002

Question 8 – BCC stated "Active/Active"; please describe your intent, or define your goals regarding Active/Active (Metro-Clustering is an example of an Active/Active arrangement whereby workloads are split between sites. This typically requires additional resources to assure full performance in theevent one site is lost.)

Answer 8 – BCC believes our design is clearly designed in the RFP

Question 9 – Please identify the distance between the two sites (A/A requires synchronous replication, which is distance and latency dependent)

Answer 9 – 17.5 Miles

Question 10 – What is the current round-trip latency between sites

Answer 10 – 3-4 Miliseconds

Question 11 – What is the current transport between sites

Answer 11 – ATT 500 mbps switched link

Question 12 – Please verify or restate the latency reuqirement for the All Flash Arrays; currently it is stated as <.3 latency (Our presumption is that BCC is asking for 0.3ms latency, or 300 microsystems, at a sustained 120,000 IOPS; what is driving the need for that level of performance and response times?)

Answer 12 – Future proofing and high speed transactional database (OracleDB)

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Submitted Questions and Answers

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03/27/2017 (continued)

Question 13 – What is the average block size of your performance applications (block size affects IOPS but boosts throughout)

Answer 13 – 4-8 kb

Question 14 – What is the starting capacity required for the video surveillance array (using the raw figure of 126TB, is BCC assuming a 2:1 compression ratio on video?)

Answer 14 – 126 TB - no assumption of compression on video

Question 15 – Please advise on the phrase "integrate to the cloud at any time" (presuming a cloud service such as Azure or AWS; are there others that the College has in mind)

Answer 15 – The ability to migrate data easily to AWS or Azure as needed

Question 16 – Our experience usually places throughput parameters as the determining factor for efficient backups; latency is usually a function of primary storage (Throughput is generally a function of high speed writing of streamed data, and may have influence on the restoring of files as well)

Answer 16 – OK?

Question 17 – What is the frequency of backups in terms of fulls, incrementals, and number of days residing before archival to cloud or tape

Answer 17 – Minimum 15 Minute intervals on high priority applications with a nightly on all servers and applications

Question 18 – What is the current capacity in TB being backed up within your cycles

Answer 18 – approximately 20TB weekly with nightly incrementals and full on weekends (rough estimate)

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Submitted Questions and Answers

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03/27/2017 (continued)

Question 19 – What is the growth rate of the backup data, and is there a desire to retain BU copies longer

Answer 19 – Unknown

Question 20 – Please define, or reference, the "Industry Standard 4-3-2-1-0 design"

Answer 20 –

Question 21 – At what perfrmance levels must the B/U systems run the Mission Critical and Business Critical applications in case of the primary systems being offline

Answer 21 – At least half of full production

Question 22 – Please classify, or define, your "SLA's"

Answer 23 – 24x7x4

Question 24 – What is the underlying hypervisor technology being used, or desired, to allow for the "movement of workloads" between primary and secondary systems (for instance, using Vmware Storage vMotion allows for the movement of workloads from one platform to another non-disruptive (which we support)

Answer 24 – Vmware Storage vMotion is our current technology