



REQUEST FOR INFORMATION ADDENDUM
PURCHASING OFFICE
CITY OF AUSTIN, TEXAS

REQUEST FOR INFORMATION: JTH0200 ADDENDUM NO. 1
DATE OF ADDENDUM: October 15, 2014

This addendum is to incorporate the following changes/information to the above referenced solicitation. To the extent that the previous Answers from RFP JTH0303 apply to this Request for Information, RFI JTH0200 they are resubmitted here, as appropriate, for review. Some additional questions received are also submitted here for your information:

- Q1. Will Austin Energy be paying for Proof of Concepts or anything related to response to this RFI?
- A1. No. Austin Energy will not be paying for Proof of Concept or for anything related to response for this RFI. All costs for preparing and submitting answers to this RFO will be carried by the Vendor. All submittals provided to the Austin Energy in response to this RFI will become the property of Austin Energy.**
- Q2. Is there an incumbent contractor for Austin Energy regarding IT?
- A2. There is no “incumbent contractor.” This project is net new. Also, this isn’t a request for a “fresh IT management strategy.” This is an opportunity for a solution to meet our strategic vision requirements, as outlined in the RFI.**
- Q3. On page 1 of the RFI, 0500, Section 1 Introduction, you state that “The major requirements for the proposed solution include: 1. Ability to seamlessly move applications hosting from one location to another over a minimum of three locations within a 100- mile radius.” Would you consider extending the 100-mile radius?
- A3. Yes, an increased radius would be considered but preference will be given to vendors whose sites are all contained within the State of Texas.**
- Q4. Is it possible to get a list of the current IT mission support contractors?
- A4. In the broadest sense, we work with IBM, HP, Dell, Hitachi, EMC, Cisco, Oracle, CA, SUSE, ServiceNow, Ricoh, Motorola, Sun Guard, Panduit, Chatsworth, Avaya and many other smaller market niche players with a wide variety of applications and systems. We have existing application –specific managed services and hosting contracts and are considering others at this time.**

- Q5. Can respondents only provide a Proposal B with no integration constraints?
- A5. Yes, this is a Request for Information. Respondents can provided any information they believe is pertinent in any format they believe is relevant.**
- Q6. What are the application architectural dependencies between the Windows and AIX platforms?
- A6. In the existing architecture, the database and application tiers run on AIX for some applications. Windows is used for some MS SQL and other AD integration applications.**
- Q7. Is Austin Energy interested in re-platforming the AIX systems to x86 as part of the RFI?
- A7. If it facilitates achieving the stated goals of the RFI, it is a possibility.**
- Q8. Austin Energy appears to have made significant investments in local datacenters for all infrastructure management. Would Austin Energy consider hosting in a 3rd party datacenter elsewhere in Texas?
- A8. At this time, no. This is out of scope of our RFI goals and current strategic vision but parties are welcome to submit their ideas.**
- Q9. Can the production workloads be located in a 3rd party Texas datacenter, and be DR replicated to a non-Texas datacenter?
- A9. 3rd party hosting is out of scope for this RFI and our strategic vision.**
- Q10. It looks like the application availability requirements are 100%; however service outage details are requested. Are the RPOs and RTOs both "0" for any and all applications in scope of this RFP indicating an active/active implementation across sites? Please confirm, or clarify.
- A10. We want to explore "small" RTO and RPO factors. As per the RFI, the strategic focus here is in enabling applications/service mobility between datacenters/sites, while achieving minimal RTO/RPO.**
- Q11. Please provide a list of applications where a managed solution is being requested.
- A11. We are not soliciting a "managed solution." We are requesting a technology that we can manage.**
- Q12. How is data and transaction replication architected today?
- A12. There currently minimal implementation of replication at the data or application (transaction) layers in AE's applications/services, although some capabilities do exist.**
- Q13. Are the Austin Energy datacenters rated Tier3 or above?
- A13. Data Center Tier rating is not relevant to this POC.**

Q14. Please provide a hardware list of where the workloads are running with utilization data.

A14. For security reasons, AE will not be providing this information.

Q15. Does current WAN latency between datacenters meet the following minimum requirements:

ESXi Management 10ms (RTT)

Metro vMotion 10ms (RTT)

Storage Replication Link 5ms (RTT)?

A15. Network latency between RLC and SCC is 0.96ms. Between TLC and SCC is 0.55ms. There currently isn't ESXi, vMotion between DC's. There was some storage replication testing between the XIV's and also the SVC's RLC-- TLC, but that was more or less FCOE.

Q16. Is the City of Austin's current network policy that will not allow for a single contiguous VLAN between two or more datacenters open to modification/change, if required, to meet the City of Austin / Austin Energy goal of Application failover from active to standby site with no outage??

A16. The policy is open to change provided the vendor provides: a) A detailed statement of the benefits of changes to the current policy, b) detailed information on the steps that Austin Energy would need to take to enable the proposed changes, and c) an analysis of any alternatives available.

Q17. Please describe the number of standalone hosts at each site including Operating system.?

A17. RLC - 13 (11 Windows, 2 AIX) plus a 3 node Exchange cluster TLC - 21 (19 Windows 2 AIX) plus a 4 node Fusion cluster (NOTE: snapshot data - servers quantities may change). Standalone server quantities reflect a "point in time" snapshot. Vendors should NOT expect that this information will remain constant. These quantities should be used as guidelines and not as absolutes.

Q18. Please describe the vSphere environment in detail at each site, including:

(a) Number of vSphere hosts at each site

(b) Number of vCenter servers at each site

(c) Type of shared storage in use at each site

(d) Number of VMs at each site, including:

i) Are RDM in use?

ii) In the event that iSCSI SANs are in use, are RAW iSCSI LUNs mapped to VMs using guest iSCSI initiators in use?

- A18. (a) RLC - 11 ESXi hosts, TLC - 19 ESXi hosts**
- (b) one per site**
- (c) Fibre Channel Storage with SVC datastores, RAW SAN LUNS for AIX and Oracle RAC**
- (d) RLC - 172, TLC - 269**
- Q19. Will Austin Energy be providing a list of existing Server, Network and Storage systems to include details like number and types of processors, storage capacities, drive types, etc?
- A19. No. This level of detail is not necessary for a proof-of-concept engagement. We are asking for an architecture design that would replace the existing system(s).**
- Q20. What further detail associated with the Visio of the Austin Energy Enterprise SAN/Storage Architecture is available?
- A20. No additional detail is planned to be provided for this proof-of-concept engagement. Specific requests for other information should be clearly defined by requesters.**
- Q21. What are performance requirements associated with all components?
- A22. There are no *specific* performance requirements for this RFI. However, we expect that any proposed solutions utilize "current" technology in terms of processor architectures, speeds, and network, FC, and storage architectures, disk geometries, RAID configurations, and speeds. Participants should specify the performance capabilities and scalability of their responses.**
- Q23. Section 2.2 - DEC-VAX support. Is the DEC - VAX in cluster today? Is there more information regarding version, etc. Should it be contemplated in the PoC?
- A23. No – this should not be contemplated in the POC**
- Q24. How many physical vs virtual servers exist at each site? Is VMware only or is HyperV also utilized?
- A24. VMWare only. Virtual server count - RLC - 172, TLC - 269.**
- Q25. The three data center replication, is it two-way replication meaning that the primary site will replicate to the two secondary sites. Or will this be a three way replication were Site A replicates to Site B; and Site B then replicates to Site C; and Site C Replicates to Site A (Tri-way)?
- A25. Vendor should submit the best solution possible with their system. We are open to either option.**

Q26. The RFI states: "High availability design: must allow hosted applications to survive the loss of one server, one rack, one site and/or one data center without interruption to application/service." Can you provide the RTO and RPO for the failover to each datacenter?

A26. Vendors should state the RTO and RPO limitations of their submittal subject to the ideal condition of RTO=0 and RPO=0 per the RFP stated target of "without interruption to application/service". MAXIMUM RTO that will be considered is 5 minutes, MAXIMUM RPO that will be considered is 1 hour.

Q27. Will Austin Energy be providing a list of applications and associated supporting infrastructure and performance requirements for those applications?

A27. No.

Q28. Section 5.10.2 HW and SW Configuration for POC: What are the detail service level specifications/ simulation requirements of the AE Applications that the application component of the POC are required to meet?

A28. Submitters should include their best offering to meet the target of "without interruption to application/service."

Q29. Section 5.10.2 HW and SW Configuration for POC: What are the service level requirements of the 3 AE tiers (e.g. availability, performance, recoverability)?

A29. Submitters should include their best offering to meet the target of "without interruption to application/service". MAXIMUM RTO that will be considered is 5 minutes, MAXIMUM RPO that will be considered is 1 hour.

Q30. Section 5.10.2 HW and SW Configuration for POC: What does AE see as the necessary touch points / interfaces with their existing applications, if any?

A30. During the POC we anticipate NO touchpoints with existing AE applications/network/hardware.

Q31. Section 1.1 - What does the seamlessly move of applications mean? Does this ability to move application require live migration or can it be cold migration? Are infrastructure adjustments acceptable?

A31. Infrastructure adjustments are acceptable. Seamless move means being able to move an application with no downtime and no loss of functionality.

Q32. Section 1.1 - What are the applications requirements/limitations. It's possible to move applications across any distances, as long as the application can tolerate the added latency.

A32. Austin Energy does not have any specific limitations. We need a solution to support general three-tier applications (web, application, database) with a potential to have individual components located locally (in the same datacenter) or, if network latency permits, to have components able to freely move or run in any configured location/datacenter. Please design a

solution to allow for general Exchange 2010, WebSphere, portal applications and Oracle/SQL backend with general requirements on latency. Per our network architect, "the network latency from RLC to the NTP server at SCC is .96ms, and from TLC to SCC is .55ms, so a RTT of 10ms should be eminently achievable." Submitters should include their best offering to meet the target of "without interruption to application/service"

Q33. Section 1.6 second bullet - Application failover with no outage. High Availability solutions (clusters) require a reboot in the standby system (even as a virtual machine, as in VMWare case). Is a reboot considered outage? What is your definition of an outage?

A33. An "outage" is defined as any interruption in service or any period of time when the application/service is unavailable for normal processing by users and/or other dependent systems. So, yes, a reboot that limits application/service availability is considered an outage.

Q34. Is Oracle Fusion Middleware (WebLogic, SOA, Identity Access Management, others) used in the Austin Energy technology stack?

A34. No. We currently use IBM's IAM stack -- TIM, TAM, WebSeal. Oracle Fusion Middleware is not used in the AE stack.

Q35. In regard to failover from one datacenter to another, does Austin Energy run any kind of clustering, i.e. Oracle RAC, Microsoft Cluster, HACMP?

A35. We use Oracle RAC and Microsoft Cluster.

Q36. Is Oracle RAC or Single Instance used?

A36. We use both RAC and Single Instance .

Q37. Is DB2 used?

A37. Yes in a "blackbox" mode to support some applications.

Q38. Is Microsoft Sharepoint, .NET, IIS, and other Microsoft middleware components used in the Austin Energy technology stack?

A38. Yes. All of the named systems are used.

Q39. Is IBM FileNet, EMC Documentum, or other document management system used?

A39. FileNet.

Q40. Is the DMZ expected to be extended between the multiple sites, or will it be isolated?

A40. Respondents should include recommendations regarding use of DMZ extension(s) that would be required to support their proposal and provide

recommendations on the most robust yet secure architecture they can propose.

Q41. Section 1.6 third bullet - How are the multiple LAN's segregated between sites?

A41. AE operates a private WAN system that is used to tie all LAN segments together. Currently, all LANs are segregated using firewalls

Q42. The RFI states that Austin Energy has dark fiber connectivity between all three data centers, questions are:

(a) Is AE managing the dark fiber using DWDN?

(b) If so, will there be dedicated fibre or lambdas to achieve replication between all three sites?

(c) Or will the connectivity be over the 10Gb network?

A42. (a) No. (b) Dedicated fibers can be assigned between existing AE sites.

(c)Austin Energy would prefer to keep replication traffic over FC SAN, but 10Gb network is a possibility. Vendors should include a recommended approach in their response.

Q43. Can you provide the Circuit Distance in kilometers between: Town Lake Center to Rutherford Lane Center then to System Control Center ? (*not a straight line distance but the actual distance the Fibre Cable runs*)

A43. No. Vendors should state limitations of distance in their proposals in this proof-of-concept exercise. There are multiple fiber paths between AE sites that take different routes. As a point of reference, the vendors solution should work at a MINIMUM of 50 kilometers.

Q44. Absent detailed specifications, this seems to be more in line with an RFI process. How does AE intend to use pricing provided when it is not directly tied to AE detailed specifications for performance etc?

A44. This has now become a Request for Information (RFI)

Q45. Are vendors to be providing pricing on the POC environments only, or on a production set up?

A45. Production.

Q46. Is there a way to get a handle on what the AE IT organization looks like, who is responsible for what?

A46. Organizational chart is provided at attachment 1.

- Q47. Specific information on data centers and data center locations---can we get an idea of the number of facilities interconnected that spoke out, NERC CIP requirements? Looking for a Total count of Austin Energy locations accessing the system?
- A47. The scope of this RFI is the three datacenters specified in the RFI.**
- Q48. Clarify the Proof of Concept Execution in the RFI---contract negotiation before start of Proof of Concept---when contract is signed is there a monetary value to the Contract?
- A48. POC execution costs will all be borne by the respondent. There is no monetary value in this exercise.**
- Q49. What is the intent of the Contract that will be needed?
- A49. Identification of key project dates and other documents which relate to Workplace Security and required authorizations for receiving technical details related to systems. Since the POC will be conducted offsite there should be limited need for these types of agreements.**
- Q50. Architectural design but not a goods procurement but you want us to price the goods that would be there if implementation POC successful will you provide hardware list and loads as provided in Addendum 2? How can we price without numbers and performance characteristics?
- A50. Provide the cost of the configuration of your POC solution. We will derive a unit cost for your solution based on the solution specifications and POC configuration costs.**
- Q51. Our pricing depends heavily on volume? Are your looking for MSRP pricing for everyone might be difficult to put competitive pricing on the table?
- A51. Looking to put your best unitized price forward regardless of its source.**
- Q52. From unit pricing around services, hourly rate, weekly rate, daily rate, depending on size and complexity of what we design?
- A52. Please focus on the architectural solution proposal for the RFI. Migration/installation/consulting services are out of scope for this RFI.**
- Q53. Can AE note the major changes to the Request... differences between the RFP and RFI?
- A53. Since this is a RFI, the majority of the contractual terms and conditions have been eliminated. We have removed some diagrams as well. Section 3.3 refers to a former table in Appendix A, which is now included as Attachment 2.**

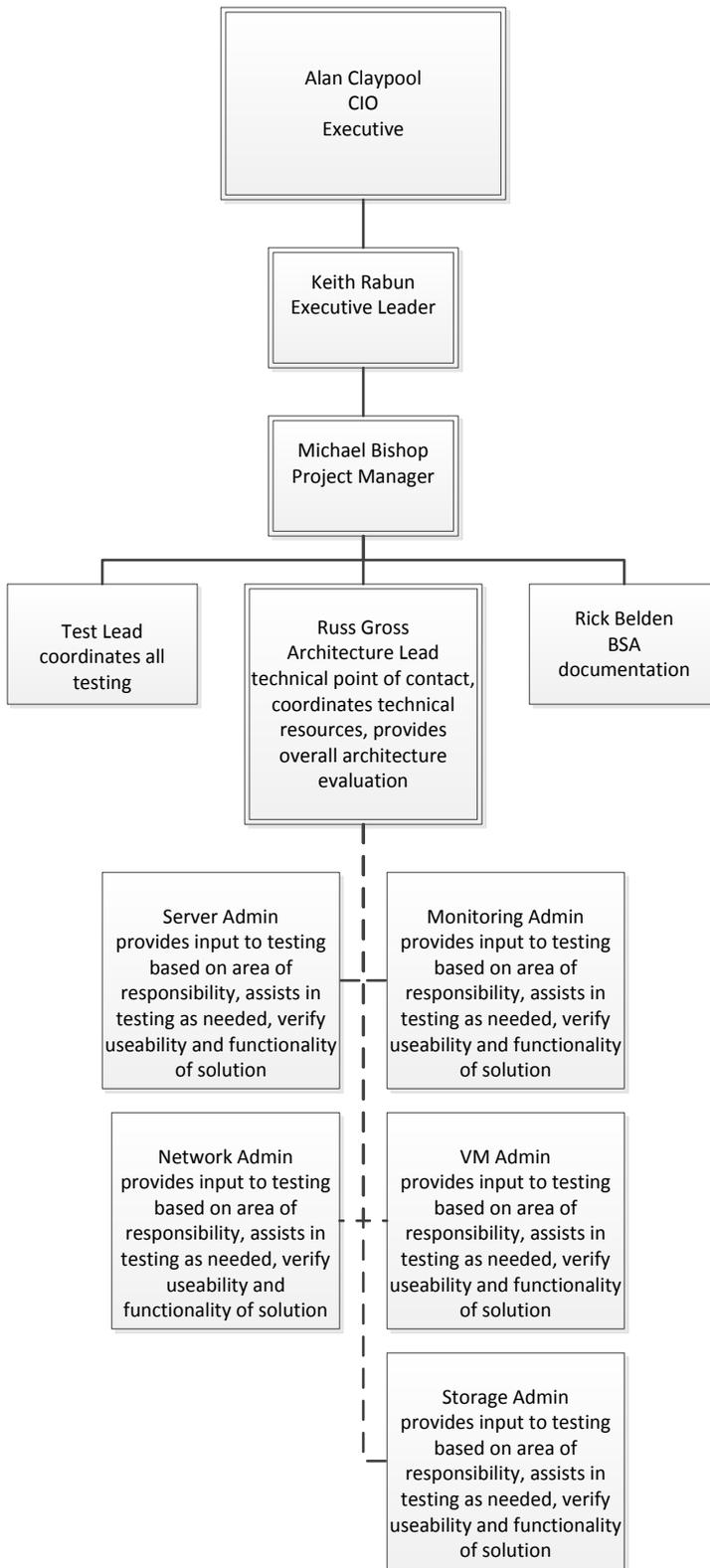
All other terms and conditions remain the same.

BY THE SIGNATURES affixed below, this Addendum is hereby incorporated and made a part of the above-referenced Solicitation.

APPROVED BY:

James T. Howard, Senior Buyer Specialist
Purchasing Office, 512-322-6307

Attachment 1 Organizational Chart
Attachment 2 Table of Suggested Requirements



Resources shown here to be used on an "as needed basis."

Appendix A Matrix of Requirements

Table 1 Mandatory Requirements

| Requirement Description | Requirement met by base product | Requirement met with configuration | Requirement met with customization |
|---|---------------------------------|------------------------------------|------------------------------------|
| Must allow live migrations of virtual machines between at least two sites. | | | |
| Failover must support application/service continuity despite non-contiguous network/VLANs at each site. | | | |
| Must support the following guest operating systems: SUSE Linux | | | |
| Must support the following guest operating system: RedHat Linux | | | |
| Must support the following guest operating system: Windows 2K3, 2K8 | | | |
| Must integrate with Cisco networking infrastructure in methods supported by Cisco. | | | |
| Must integrate with Brocade SAN infrastructure in methods supported by Brocade. | | | |
| Must utilize or integrate with VMWare vSphere hypervisor and management | | | |
| Must feature "orchestration" software that allows for simplified provisioning, configuration, and management of system/network/storage resources | | | |
| Must include/integrate enterprise monitoring capabilities for networking, storage, systems, and have the capability to extend monitoring to applications/services that reside on this infrastructure. | | | |
| Must include a method to monitor/manage high-availability and failover of infrastructure, applications, services | | | |
| | | | |
| Must support hybrid cloud and Big Data environments. | | | |
| Must facilitate consolidation of resources. | | | |
| Must provide security, availability and automation for hybrid cloud environments. | | | |
| Must facilitate scale-out and scale-up of system resources. | | | |
| Must provide automated, rule based | | | |

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|--|--|--|--|
| provisioning vor virtual server environments. | | | |
| Must non-disruptively migrate data between tiers, including drive and RAID type changes. | | | |
| Must be able to migrate data while maintaining replication. | | | |
| Must optimize multipathing and failover across all channels in VMWare environments. | | | |
| Must fully support virtualized server environments, leveraging existing resources and reducing both costs and energy requirements. | | | |
| Must optimize tiered storage in the array. | | | |
| Must ensure predictable performance by application tier. | | | |
| Must provide encryption for data in transit. | | | |
| Solution must be flexible enough to support both structured (database) and unstructured (email, documents, etc.) data | | | |
| Must support Recovery Point Objectives (defining maximum data loss) and Tecovery Time Objectives (defining maximum downtime) | | | |
| Must provide virtual block storage that enables a single copy of data to be shared, accessed and relocated over distance – removing physical barriers within, across and between data centers. | | | |
| Must be capable of dealing with evolving data center changes including server virtualization, multiple operating systems, various SAN platforms, and multiple (more than 2) data centers. | | | |
| | | | |

Table 2 Desired Requirements

| Requirement Description | Met by base product | Met with configuration | Met with customization | Future Feature | Requirement not met |
|---|---------------------|------------------------|------------------------|----------------|---------------------|
| | | | | | |
| Support the following guest operating system: AIX | | | | | |
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