

**DIVISION OF FINANCE**

**Procurement Services**



**REQUEST FOR PROPOSAL**

**HPC Storage System**  
(Project issued with updated specifications)  
**RFP Main 21-0033**

**PROPOSAL MUST BE RECEIVED BEFORE:**

**2:00 p.m. CST on July 26, 2021**

**Responses are to be submitted electronically via the AggieBid Portal:**  
<https://bids.scquest.com/apps/Router/PublicEvent?CustomerOrg=TAMU>

**OR**

**MAIL PROPOSAL TO:**

**Texas A&M University**  
Procurement Services  
P. O. Box 30013  
College Station, TX 77842-3013

**HAND DELIVER AND/OR EXPRESS MAIL TO:**

Texas A&M University  
Procurement Services  
Purchasing & Stores Building  
Agronomy Road  
1477 TAMU  
College Station, TX 77843-1477

**Show RFP Number, Title and Summary on All File Attachments/Hard Copies as Applicable**

**NOTE:** PROPOSAL must be time stamped at the **Texas A&M University Department of Procurement Services** before the hour and date specified for receipt of proposal.

Sealed proposals will be received until the date and time established for receipt.

**REFER INQUIRIES TO:**  
  
Patty Winkler, C.P.M.  
Assistant Director  
Texas A&M University  
Procurement Services  
email: [p-winkler@tamu.edu](mailto:p-winkler@tamu.edu)

**Table of Contents**

|                   |   |           |
|-------------------|---|-----------|
| <b>SECTION 1.</b> | <b>INTRODUCTION</b>                                 | <b>4</b>  |
| 1.1               | Introduction .....                                  | 4         |
| 1.2               | Brief History and Current Organization .....        | 4         |
| 1.3               | Scope of Work.....                                  | 4         |
| 1.4               | Award .....   | 4         |
| 1.5               | Term of Agreement .....                             | 4         |
| 1.6               | Definitions.....                                    | 4         |
| 1.7               | Schedule of Events .....                            | 5         |
| <b>SECTION 2.</b> | <b>REQUIREMENTS</b>                                 | <b>6</b>  |
| 2.1               | Objectives.....                                     | 6         |
| 2.2               | Current Environment .....                           | 6         |
| 2.3               | Requirement Categories .....                        | 7         |
| 2.4               | Storage System Requirements.....                    | 7         |
| 2.5               | Technical Proposal .....                            | 10        |
| 2.6               | System Delivery .....                               | 10        |
| 2.7               | Acceptance Criteria .....                           | 11        |
| <b>SECTION 3.</b> | <b>GENERAL INFORMATION</b>                          | <b>12</b> |
| 3.1               | Submittal Deadline .....                            | 12        |
| 3.2               | Submittal Instructions and Location.....            | 12        |
| 3.3               | Texas A&M Contacts .....                            | 12        |
| 3.4               | Inquiries and Interpretations.....                  | 12        |
| 3.5               | Electronic State Business Daily Website.....        | 12        |
| 3.6               | Open Records .....                                  | 13        |
| 3.7               | Terms and Conditions.....                           | 13        |
| 3.8               | Proposal Components .....                           | 13        |
| <b>SECTION 4.</b> | <b>GENERAL TERMS AND CONDITIONS</b>                 | <b>14</b> |
| 4.1               | General .....                                       | 14        |
| 4.2               | Final Review and Approval.....                      | 14        |
| 4.3               | Definitions .....                                   | 14        |
| 4.4               | Time of Performance.....                            | 15        |
| 4.5               | Default.....  | 15        |
| 4.6               | Termination .....                                   | 15        |
| 4.7               | Agreement Amendments .....                          | 15        |
| 4.8               | Independent Vendor Status.....                      | 15        |
| 4.9               | Right to Audit.....                                 | 15        |
| 4.10              | Sales and Use Tax .....                             | 16        |
| 4.11              | Observance of Texas A&M Rules and Regulations ..... | 16        |
| 4.12              | Non-Disclosure.....                                 | 16        |
| 4.13              | Publicity .....                                     | 16        |
| 4.14              | Severability.....                                   | 16        |
| 4.15              | Non-Waiver of Defaults .....                        | 16        |
| 4.16              | Governing Law.....                                  | 16        |
| 4.17              | Intellectual Property .....                         | 16        |

|   |           |
|---|-----------|
| <b>SECTION 5. CONTRACTUAL REQUIREMENTS</b>                      | <b>17</b> |
| 5.1 Texas Public Information Act.....                           | 17        |
| 5.2 Insurance Requirements .....                                | 17        |
| 5.3 Indemnification .....                                       | 17        |
| 5.4 Other Benefits.....   | 17        |
| 5.5 Alternative Dispute Resolution .....                        | 17        |
| 5.6 Prohibition Involving Human Trafficking.....                | 17        |
| 5.7 Not Eligible for Rehire .....                               | 18        |
| 5.8 Boycotting Israel .....                                     | 18        |
| 5.9 Business with Certain Countries & Organizations .....       | 18        |
| 5.10 Billing Resolutions.....                                   | 18        |
| 5.11 Payment.....   | 18        |
| <b>SECTION 6. EXECUTION OF OFFER</b>                            | <b>19</b> |
| 6.1 Proposer Affirmation.....                                   | 19        |
| 6.2 Texas Family Code Section 231.006 .....                     | 19        |
| 6.3 Substitute W-9.....   | 20        |
| 6.4 Direct Deposit.....   | 20        |
| 6.5 Signature.....  | 20        |
| <b>SECTION 7. RESPONDENT’S QUESTIONNAIRE/COMPANY EXPERIENCE</b> | <b>21</b> |
| 7.1 Company Profile.....  | 21        |
| 7.2 References .....  | 21        |
| <b>SECTION 8. PRICING</b>                                       | <b>22</b> |
| 8.1 Pricing .....   | 22        |
| <b>SECTION 9. EVALUATION CRITERIA FOR AWARD</b>                 | <b>23</b> |
| 9.1 Evaluation Information .....                                | 23        |
| 9.2 Demonstration/Presentation.....                             | 23        |
| 9.3 Evaluation Criteria and Weights.....                        | 23        |
| <b>SECTION 10. NON-COLLUSION AFFIDAVIT</b>                      | <b>24</b> |
| <b>Appendix A – Insurance Requirements .....</b>                | <b>25</b> |
| <b>Attachment A – HUB Subcontracting Plan .....</b>             | <b>27</b> |

---

## SECTION 1 INTRODUCTION

### 1.1 Introduction

Texas A&M University, Qatar (TAMUQ) is accepting proposals and intends to enter into an agreement with a qualified vendor to provide a new HPC Storage System for the Department of Research Computing at Texas A&M University campus located in Doha, Qatar in accordance with the terms, conditions and requirements set forth in this Request for Proposals.

By submitting responses, each respondent certifies that it understands this RFP and has full knowledge of the scope, nature, quality, and quantity of the work to be performed, the detailed requirements of the services to be provided, and the conditions under which the services are to be performed. Each respondent also certifies that it understands that all costs relating to preparing and responding to this RFP will be the sole responsibility of the Respondent.

**RESPONDENTS ARE CAUTIONED TO READ THE INFORMATION CONTAINED IN THIS RFP CAREFULLY AND TO SUBMIT A COMPLETE RESPONSE TO ALL REQUIREMENTS AND QUESTIONS AS DIRECTED.**

### 1.2 Brief History and Current Organization

Established in 1876, Texas A&M has grown to become a world leader in teaching, research and service, with an international reputation for excellence in both academics and athletics. Since 2003, Texas A&M University has offered undergraduate degrees in chemical, electrical, mechanical and petroleum engineering at Qatar Foundation's Education City campus. In addition to engineering courses, Texas A&M at Qatar provides instruction in science, mathematics, liberal arts and the humanities. The curricula offered at Texas A&M at Qatar are materially identical to the ones offered at the main campus in College Station, Texas, and courses are taught in English in a coeducational setting. The reputation for excellence is the same, as is the commitment to training engineers equipped to lead the next generation.

The mission of the Qatar campus is to embrace the University's traditional goals of teaching, research and service and to replicate the world-class undergraduate engineering program offered at the main campus. Texas A&M at Qatar will realize the highest quality undergraduate programs through inseparable connections to its own programs in research and graduate studies. In all of its efforts, Texas A&M at Qatar will ensure that it is contributing significantly to the international knowledge and research needs of Qatar and the region. Moreover, Texas A&M at Qatar is strongly committed to establishing an interface within the community that will assist in improving the lives of the people of Qatar. The University strives to do that while cultivating international relationships and shared understanding that will pay remarkable dividends for decades.

### 1.3 Scope of Work

In light of its HPC storage needs and objectives, TAMUQ invites vendors to submit proposals for an HPC storage system running a high performance, cluster-wide parallel file system. Storage systems supplying a usable disk capacity of at least 800 TB and sustained aggregate read bandwidth of approximately 12 GB/s or more shall be considered. The storage shall be vendor agnostic in terms of being able to support any Linux based HPC system. All technical requirements for the storage proposals are detailed in Section 2.

The successful storage vendor must agree to collaborate in good faith with TAMUQ's existing HPC vendor (HPE/Cray) in order to deploy and maintain the solution. The storage vendor must likewise collaborate with any future vendor from which TAMUQ chooses to purchase its next generation HPC system.

### 1.4 Award

Any agreement resulting from this RFP will be awarded to one vendor, all or none.

### 1.5 Term of Agreement

The university expects to enter into an agreement with the successful vendor from the period of date of award, and last through 3-5 years of maintenance support post-installation period, depending on the best value for the university.

### 1.6 Definitions

Whenever the following terms are used in these General Terms and Conditions or in other documents the intent and meaning shall be interpreted as follows:

RFP shall mean Request for Proposal.

Proposal shall mean Respondents offer.

Texas A&M shall mean Texas A&M University and other system parts.

Respondent shall mean the individual, partnership, corporation, or other entity responding to this RFP.

Vendor shall mean the individual, partnership, corporation, or other entity awarded an agreement for labor or for equipment & supplies under this RFP in accordance with the terms, conditions, and requirements herein.

Agreement shall mean an agreement, documented by written instrument, between Texas A&M and the successful respondent to provide equipment and/or services to Texas A&M University.

TAMUQ shall mean Texas A&M University branch campus located in Doha, Qatar.

**1.7 Schedule of Events**

The review and approval of RFPs is a multi-step process that requires variable amounts of time.

**Responders are advised that the projected “Formal Execution of Agreement” date as listed in the “Tentative Timetable” may require extension.**

**Tentative Timetable**

|  |                                    |
|--|------------------------------------|
| Deadline for Questions .....                             | July 13, 2021 @ 5:00 pm CST        |
| Posting mailing Addendum and Response to Inquiries ..... | July 19, 2021 @ 5:00 pm CST        |
| <b>Deadline for Receipt of Proposal.....</b>             | <b>July 26, 2021 @ 2:00 pm CST</b> |
| Evaluation of Proposals Completed.....                   | TBD                                |
| Formal Execution of Agreement (Projected).....           | TBD                                |

---

## SECTION 2 REQUIREMENTS

### 2.1 Objectives

Texas A&M at Qatar intends to retire our old DDN storage after the acquisition of a new storage system. In doing so, we wish to provide flexible storage resources that can accommodate the needs of a wide variety of HPC workloads for current and future research activities.

In general, our workloads are diverse and include both large file sequential I/O as well as random I/O patterns, not to mention small files. Our current system is well suited to large file I/O but does not support small file I/O very well (which is typical for Luster-based systems). To minimize spending, the approach we will follow is to initially procure a system with capabilities roughly matching those of the existing DDN system, and then upgrade performance of that system in the subsequent year.

To enable this strategy, the storage proposal must include upgrade scenarios that optionally permit TAMUQ to upgrade the capacity and/or performance of the initially deployed system in the second year of its life. The performance upgrade scenario shall be targeted primarily to improving small file I/O and random I/O performance with the addition of SSDs to the solution in some form or manner. The cost of the upgrade scenarios shall be specified in the storage proposal, and the selection of a winning proposal will depend, among other things, on the total cost of the solution (to include both the initially deployed system as well as the potential upgrades).

### 2.2 Current Environment

TAMUQ currently operates a DDN ExaScaler (Lustre) storage system coupled to a Cray XC40 supercomputer. The two are joined by an InfiniBand fabric consisting of 3 Mellanox FDR switches connected in a ring topology (see figure 1 for system architecture). The XC40 contains 172 compute nodes with a total of 4,128 CPU cores.

Most of our users come from the four engineering programs mentioned earlier. The system workload is mixed, but significant usage comes from applications like Gromacs, Gaussian, CP2K, NAMD, VASP, WRF and LAMMPS. Other users employ packages such as Fluent, Ansys, Abaqus and Matlab, and a few run their own codes. Our usage over the last two years has seen significant growth in AI/ML workloads with users employing many of the well-known frameworks such as PyTorch, Keras and TensorFlow.

The data center that hosts our HPC equipment is a raised-floor facility with power and network cabling routed through cable trays suspended from the ceiling. Cold air is pushed up through perforated floor tiles. The room ceiling is closed, and hot air ejected from the racks is sucked into overhead chimneys to be routed efficiently to the data center air handling units. Sufficient spare power and air-cooling capacity exists in the room to accommodate any system proposed in response to this RFP. Any proposed storage system shall be allocated space in existing data center racks and provided 230V 50Hz UPS conditioned power from pre-installed rack PDUs (Vertiv MPH2 – two MPHC1245 per rack).

The Cray XC40 comes with an (internal) Aries interconnect fabric. Apart from a few GPU nodes and a collection of service nodes which are external to the XC40 and reside directly on the IB fabric, all our conventional CPU compute nodes reside only on the proprietary Cray Aries fabric. Lustre based storage systems connect to the XC40 via Cray I/O nodes that are configured (in Lustre terminology) as LNET routers. We currently use three such I/O nodes to connect to our DDN system.

Non-lustre storage systems may also connect to the XC40 via I/O nodes if those nodes are configured with DVS, Cray's Data Virtualization Service. DVS is a distributed software layer for a collection of dedicated I/O nodes with interfaces both on the Aries network as well as on some external network -- in our case FDR InfiniBand. In order to mount a non-Lustre file system, a DVS node needs to run the relevant filesystem client (e.g. Spectrum Scale, PanFS, NFS, etc.). That file system can then be made available internally on the Aries network and mounted by the Cray compute nodes as a DVS file system. Cray has optimized DVS for scalability and resilience so it can efficiently support large numbers of Cray compute clients. Each DVS node is able to inject up to approximately 4GB/s of I/O into the Aries fabric, and when multiple DVS nodes are configured in a system, they are able to work in parallel to share the I/O load being imposed on the storage.

Note that the Cray I/O nodes may be configured (and re-configured) as LNET routers or DVS nodes as required; the node hardware is common, and it is the software layer that determines the function of the node (LNET vs DVS).

### Deployment & Data Migration Scenario for New Storage

For the data migration phase, we could initially attach the new storage to our InfiniBand fabric via (up to 15) spare ports on one of our IB switches (see the blue "Cray IB sw" in figure 1) while leaving the DDN storage undisturbed. The new



1. The storage system must be compute vendor agnostic, and be able to connect to existing compute resources.
2. The proposed system configuration must support a sustained aggregate file system read bandwidth of approximately 12 GB/s (or more).
3. The system must provide at least 800 TB of total usable disk capacity. Usable capacity is defined as the amount of storage that remains after excluding the space used to format the disk drives, RAID parity overhead, metadata, hot spare capacity, and any storage reserved internally by the operating system or file system.
4. The file IO subsystem must be capable of transferring data to/from a single compute node (using multi-threaded transfers) at a minimum throughput of about 2 GB/s for reads concurrently with 2 GB/s for writes, when the travel path from disk storage to the compute node is otherwise idle.
5. All cluster nodes that are directly connected to the storage fabric shall use specialized, intelligent, low-latency, network load-balanced and high bandwidth client software to access file system data in parallel.
6. The system must employ RAID 6, or other techniques to achieve similar levels of data protection.
7. The system must come configured with a suitable number of hot-spare drives or capacity (the exact number or amount of which shall be decided by mutual agreement between vendor and TAMUQ after a winning bid has been selected).
8. The system must be configured with dual-active storage controllers (if traditional storage controllers are used).
9. The system must support dual-paths between hosts and storage nodes/servers, showing resiliency in the face of component failures on the data path.
10. The system must also be resilient to the single failure of individual meta-data or storage nodes/servers.
11. The system must come configured with a cluster-wide parallel file system accessible to all compute nodes as a single namespace. By "parallel" we mean the file system must be capable of efficiently and scalably supporting concurrent reads and writes from multiple processes to a common file, such as can be accomplished using the MPI-IO interface and other parallel IO libraries like HDF5 and NetCDF. Storage systems that simply export traditional NFS or CIFS/SMB shares shall not be considered.
12. If the proposed file system requires certain nodes to be part of a SAN, the required HBAs or HCAs shall be included in the proposal. Similarly, if the proposed file system requires additional hardware, such as fiber channel switches, dedicated storage nodes, meta-data servers, or network protocol "bridges", such hardware shall be part of the proposal.
13. The system must include a centralized storage management software suite for remote management capable of system health checking, alerting and notifications, and generating aggregated metrics and graphs with selectable time intervals.
14. The storage file system must support per-user and per-group disk space quotas.
15. The system must include 3-year on-site, 8x5 NBD hardware maintenance and 3-year 8x5 NBD software maintenance. The hardware and software maintenance periods must commence only once vendor engineers complete the installation of the system at TAMUQ premises. For hardware maintenance, the vendor must also quote (if available) an option whereby replacement parts are shipped to TAMUQ on the NBD after fault diagnosis, and a duly qualified TAMUQ engineer performs the on-site maintenance/repair work once parts are received.
16. The vendor must commit to support all system hardware & software components for a minimum of 5 years from installation, and to be bound -- without exception -- to the maintenance renewal prices quoted in the proposal.
17. The storage system in aggregate must consume no more than 9KW of power.
18. The new storage system installation should be performed in a way that allows for reliable data migration from the existing storage system to the new one. The vendor must account for and accommodate TAMUQ's data migration strategy in the system design. The data migration shall be performed by TAMUQ and need not be quoted as a service in the proposal.
19. The vendor must quote the cost of registering one TAMUQ staff member in formal, hands-on training classes relevant to the operation and administration of the new system. This is apart from the knowledge transfer that takes place between vendor engineers and TAMUQ staff during and immediately following system installation. One relevant introductory course, and if available, a second advanced level course should be quoted as options in the proposal.

#### 2.4.2 Desirable requirements for the storage system:

1. The proposed system configuration must support a sustained aggregate file system read bandwidth of approximately 15 GB/s (or more).
2. The storage system shall leverage the existing TAMUQ staff expertise in managing and maintaining HPC storage.
3. The storage system must support a mix of drive technologies (SSD, SAS, SATA) within the same disk enclosure to accommodate different workload performance requirements.
4. A specialized file system client shall support network I/O transfer sizes of up to 4MB to decrease network chatter for large files.
5. The solution shall be network savvy. The interconnect for the storage solution shall use no more than 8 high speed network ports to connect to the cluster (these 8 would include 100% port redundancy).
6. The storage subsystem shall provide intelligent cache management to analyze and optimize I/O traffic in real time: aligned sequential I/O should be written through to disk to preserve cache for unaligned I/O.
7. The storage system shall provide enterprise class data integrity features to prevent silent data corruption such as Data Integrity Field, and/or Parity Check on Read.
8. The storage system shall offer accelerated rebuild times for recoverable drives.
9. The proposed file system shall support non-disruptive scaling, re-striping, and rebalancing.
10. The system management interface shall offer file system analytics capability. For instance, it shall allow admins to quickly query information such as the distribution of file sizes across the system, or the  $n$  largest users of disk capacity, or the capacity occupied by a particular directory, etc.
11. The system shall be architected as a turnkey appliance, prioritizing ease of management for admins.
12. The system shall be capable of monitoring IO performance on a per job basis (for slurm and/or PBS jobs running on the HPC system).
13. The proposed file system shall support identity management features such as UID/GID mapping, AD integration, and ACL translation.
14. The proposed file system shall support at least 512 LAN clients.
15. The proposed file system shall support native, built-in policy-based data migration and transparent file movement across varying tiers of disk based and tape-based storage while exposing a single, global namespace.
16. The storage system should not require more than 8U of data center rack space for installation.
17. The storage system should not require more than 5 kilowatts of power consumption for production use.
18. The storage system should be expandable to 2 petabytes of usable storage capacity within a 20U installation.
19. The vendor should provide credits (i.e. free of cost) that TAMUQ can apply towards the cost of registering one staff member in formal, hands-on training classes relevant to the operation and administration of the new system (see 2.4.1.19). If this condition is satisfied, it will in effect fulfill requirement 2.4.1.19 but also earn additional points for the respondent during proposal evaluation (see section 9.3).

#### 2.4.3 System Upgrade Scenarios:

Although initially the proposed storage system shall integrate with and serve the existing Cray XC40, TAMUQ expects to upgrade the capacity and/or performance of the storage and to re-attach it to a different, newer HPC system to be acquired sometime in 2022. The new HPC system shall be procured along with a storage fabric running at 200Gb/s (e.g. HDR InfiniBand, Slingshot) in which up to 14 ports -- split across two switches -- shall be allocated for storage connectivity.

The storage vendor must propose several scenarios to upgrade storage capacity and performance of the initially deployed system. Note that the performance oriented upgrade scenarios are meant primarily to improve small file IO and random IO in larger files. Vendors must propose all upgrade scenarios (from the list below) that are relevant to their storage architecture and quote them separately as options in their proposals. Proposal evaluations shall consider the costs both of the initial solution as well as of the upgrade scenarios when selecting a winning bid. Note that hardware and software maintenance for all items constituting each upgrade scenario must satisfy clauses 16 & 17 of section 2.4.1. The title of each scenario below indicates whether it is focused primarily on an increase in performance, an increase in capacity, or both. Each scenario also enumerates one or more requirements (to be treated as desirable).

##### 2.4.3.1 Scenario 1 (performance): Addition of SSD pools to existing storage controllers

In some storage system architectures, it is possible to mix drive technologies within a single enclosure and then to group different drive types into pools to better serve different classes of workloads. If this is possible for your architecture, define an upgrade scenario in which

- (a) a pool of 12 Gbps SAS SSDs within an expansion enclosure is grouped together to
- (b) supply at least 30 TB of usable capacity. This capacity should be employable
- (c) either as a separate filesystem (e.g. /scratch or /scratch2) for batch jobs, or
- (d) be able to operate as a high-performance tier with automatic policy-based migration of eligible files in and out.

If for architectural reasons the minimum capacity increment to build such a pool or tier is larger than 30 TB, then use that as the target capacity instead of 30 TB. It is understood that from the perspective of the filesystem client nodes whatever IO bandwidth is generated by this collection of SSDs shall remain capped by the performance limits of the controllers to which the enclosure is attached.

#### **2.4.3.2 Scenario 2 (performance): Addition of separate, all-flash storage nodes to the solution**

In some storage system architectures, it is possible to incorporate storage nodes or servers that are populated exclusively with SSDs to create high-performance disk tiers for demanding IO workloads. If this is possible for your architecture, define an upgrade scenario in which...

- (a) a pool of NVMe SSDs within one or more such storage nodes
- (b) provides at least 30 TB of capacity,
- (c) and is able to generate at least 20 GB/s in aggregate read bandwidth from the SSD node(s).
- (d) This capacity should be employable either as a separate filesystem (e.g. /scratch or /scratch2) for batch jobs, or
- (e) be able to operate as a high-performance tier with automatic policy-based migration of eligible files in and out.

If for architectural reasons the minimum capacity increment to build such a pool or tier is larger than 30 TB, then use that as the target capacity instead of 30 TB.

#### **2.4.3.3 Scenario 3 (performance & capacity): Addition of architectural building blocks to increase SSD capacity**

In some storage system architectures, it may not be possible to add an independent high-performance SSD tier to the storage solution (or in fact to add SSDs to existing disk pools), and instead multiple classes of drive technologies (e.g., SAS, NVMe SSD, SATA SSD, etc.) are simultaneously incorporated into the system (in fixed quantities and ratios) with the addition of every new architectural building block. In other words, the only way to add more SATA SSD to the overall solution would then be to add one additional building block, which will also bring along with it more SAS HDDs and more NVMe SSD, etc. If this accurately describes your storage architecture, define an upgrade scenario which...

- (a) increases the aggregate SSD capacity dedicated for file storage by approximately 30 TB.

#### **2.4.3.4 Scenario 4 (capacity): Addition of disk pools to existing storage controllers**

In some storage system architectures, it is possible to add storage expansion enclosures to existing controllers in order to increase available disk capacity. If this is possible for your architecture, define an upgrade scenario in which...

- (a) usable disk capacity is doubled in comparison to the initially deployed system
- (b) using disks identical in performance, capacity & type to those employed in the initial deployment.

This scenario may include the addition of multiple drive types with HDDs being the predominant drive type. Consequently, if a mix of drive types (SSDs, HDDs, etc) was attached to a single controller in the initial deployment, the same ratio of those same drive types should be maintained after the addition of disks in this upgrade scenario.

#### **2.4.3.5 Scenario 5 (performance & capacity): Doubling of storage controllers**

Many system architectures allow for scaling performance & capacity by adding controller resources to an existing system. If this is possible for your architecture, define an upgrade scenario in which...

- (a) the number of storage controllers is doubled in comparison to the initially deployed system, and
- (b) the number, capacity & type of disks attached to each new controller matches that of the disks attached to each controller of the initial deployment.

#### **2.4.3.6 Scenario 6 (performance & capacity): Addition of architectural building blocks to double the initial deployment**

Some storage system architectures do not rely on traditional storage controllers attached to scalable pools of disks. Instead, they rely on building blocks with relatively static capacity and performance characteristics to scale a system by simply adding more of these blocks. If this accurately describes your storage architecture, define an upgrade scenario which would...

- (a) double both the capacity and performance of the initially deployed system.

## **2.5 Technical Proposal**

In responding to this RFP, the vendor shall discuss its overall approach to meeting TAMUQ requirements. Specifically, the vendor proposal must:

1. Provide a complete summary of what will be delivered and when it will be delivered.
2. Explain how each system requirement has been implemented. These technical requirements have been listed and numbered in section 2.4 (entitled "Technical Requirements").
3. Include a section on the system architecture, and provide a summary of that architecture as well as block diagrams indicating all speeds and feeds. The architecture should cover the following areas:
  - a. the storage controller(s)
  - b. storage nodes and meta-data nodes (if appropriate for the proposed architecture)
  - c. the storage network
  - d. management software architecture
  - e. the parallel file system
4. Contain a section relating to reliability, availability, serviceability, and maintenance. This section should describe in detail the proposed hardware and software maintenance strategy throughout the life of the contract. The vendor must state the level of service it intends to provide at various points during the contract period (i.e., system build, system installation, acceptance testing, post acceptance, etc.). Maintenance prices should be based on next business day 8:00AM-5:00PM, Doha Time.
5. Include a summary of licensing policies (how licensing costs are calculated) for all relevant categories of software.
6. Provide electronic copies (e.g. PDF files) of documentation for the cluster/storage management software employed in the proposal.
7. Be prepared to offer an on-site (or a remote – e.g. WebEx) presentation of their proposal if requested by TAMUQ.
8. Describe the training available to include descriptions of specific courses and/or reference materials that are provided.

## **2.6 System Delivery**

The system must be delivered to Education City, Doha, Qatar by September 30, 2021 (a one-week grace period will be considered). The system must be installed by the vendor and must be operational by October 21, 2021.

The system shipping address is:

Dr. Othmane Bouhali  
Texas A&M University at Qatar  
c/o Qatar Foundation  
Education City  
P.O. Box 23874  
Doha, Qatar  
Tel: +974-4423-0038 (office)

The vendor shall include the INCOTERMS offered:

- a. For Incoterm - DDP (Delivery Duty Paid), Vendor will deliver the goods DOOR-TO-DOOR to TAMUQ including Duties, Taxes and Customs Clearance. No additional charge will to TAMUQ.

- b. For Incoterm – DAP (Delivered at Place), Vendor will deliver the goods DOOR-TO-DOOR to TAMUQ. TAMUQ shall be responsible for all customs duties and fees (and for clearance procedures in general) once the system arrives in Qatar.

## 2.7 Acceptance Criteria

### 2.7.1 Installation

Installation of the system must be considered complete before the system is formally accepted by TAMUQ. A complete installation means that:

- a. All storage hardware (controllers, disk enclosures, storage or meta-data servers, etc.) has been physically installed, wired, configured and made fully functional.
- b. All storage networking (IB fabric, Ethernet networks) has been connected and is fully functional.
- c. The parallel file system software has been installed, configured and made fully functional.

### 2.7.2 Performance Features and Technical Specifications

The system must meet the following functionality and performance tests within 2 weeks of being declared ready by the vendor for full operation:

- a. The storage system must successfully demonstrate the throughput rates stated in section 2.4 for the I/O subsystem (aggregate read bandwidth, and single client I/O throughput). A tool such as IOZone as well as various dd tests may be used for such demonstrations.
- b. It must demonstrate the capability of the management software to carry out all the appropriate functions for the effective control and monitoring of the system.
- c. It must successfully demonstrate hardware redundancy (e.g. I/O failover) where applicable.

### 2.7.3 Reliability

Once the system has been installed and declared ready for full operation by the vendor:

- a. Failures in the storage system (excluding the storage fabric) that degrade I/O performance to the extent that it reflects on interactive response times for cluster users must not occur at all in the first 2 months of operation.

Once the system has successfully met all these criteria, it shall be formally accepted by TAMUQ.

---

**SECTION 3  
GENERAL INFORMATION**

**3.1 Submittal Deadline**

**3.1.1** All responses must be received by Texas A&M no later than **July 26, 2021 @ 2:00 p.m. CST**

**Late responses properly identified will be returned to respondent unopened. Late responses will not be considered under any circumstances. Texas A&M shall not be responsible for failure of electronic equipment or operator error.**

**3.2 Submittal Instructions and Location**

3.2.1 Proposals including Execution of Office (Section 6) must be signed by Respondent's company official authorized to commit such proposals. Failure to sign the Execution of Offer may be basis for proposal disqualification.

3.2.2 Complete proposals may be submitted either USPS, express mail or electronically via the following two options. Due to COVID-19 it is preferred one of the following electronic methods be utilized.

3.2.3 Option 1 One (1) Electronic Copy submitted via email to [tamuaggiebid@tamu.edu](mailto:tamuaggiebid@tamu.edu) with the subject line "RFP Main 21-0033; HPC Storage System - paw".

Option 2 One (1) Electronic Copy submitted via our electronic bid system, AggieBid at the following link - <https://bids.sciquest.com/apps/Router/PublicEvent?CustomerOrg=TAMU>. NOTE: Respondents that submit their RFP response via AggieBid must be a registered vendor. If you need assistance with vendor registration, please reach out to [vendorhelp@tamu.edu](mailto:vendorhelp@tamu.edu).

All electronic copies must either be in **Microsoft Office software or Adobe Portable Document Format (PDF)**. All image files must be in one of the following formats: .jpg, .gif, .bmp, or .tif. We prefer image files to already be inserted as part of a document such as a PDF. Each electronic attachment should be properly labeled for ease of identification.

3.2.4 An unreadable electronic copy due to incorrect format may reflect negatively on your proposal.

3.2.5 Facsimile (Fax) responses to this RFP are not acceptable.

**3.3 Texas A&M Contacts**

All questions must be sent by email to:

Patty Winkler, C.P.M.  
Assistant Director  
[p-winkler@tamu.edu](mailto:p-winkler@tamu.edu)

Texas A&M specifically requests that Respondents restrict all contact and questions regarding this RFP to the above named individuals. **Deadline for questions is July 13, 2021 @ 5:00 pm CST**

**3.4 Inquiries and Interpretations**

Responses to inquiries which directly affect an interpretation or change to this RFP will be issued in writing by addendum (amendment) and e-mailed, faxed or mailed to all parties recorded by Texas A&M as having received a copy of the RFP. All such addenda issued by Texas A&M prior to the time that proposals are received shall be considered part of the RFP, and the Respondent shall consider and acknowledge receipt of such in their proposal.

Only those Texas A&M replied to inquiries which are made by formal written addenda shall be binding. Oral and other interpretations or clarification will be without legal effect.

**3.5 Electronic State Business Daily Website**

It is the responsibility of interested vendors to regularly check the ESDB for any possible addenda to this project. The RFP is inclusive of all addenda issued.

<http://www.txsmartbuy.com/sp>

---

**3.6 Open Records**

Texas A&M considers all information, documentation and other materials requested to be submitted in response to this solicitation to be of a non-confidential and/or non-proprietary nature and therefore shall be subject to public disclosure under the Texas Public Information Act (Texas Government code, Chapter 552) after an agreement is awarded.

Respondents are hereby notified that Texas A&M strictly adheres to all Statutes, court decisions and the opinions of the Texas Attorney General regarding the disclosure of RFP information.

**3.7 Terms and Conditions**

The Terms and Conditions (ref. Section 4) shall govern any Agreement issued as a result of this solicitation RFP.

Additional or attached terms and conditions which are determined to be unacceptable to Texas A&M may result in the disqualification of your proposal. Examples include, but are not limited to, liability for payment of taxes, subjugation to the laws of another State, and limitations on remedies.

**3.8 Proposal Components**

The following documents are to be returned as part of your proposal submittal:

- ✓ Signed Execution of Offer (See Section 6)
- ✓ References (See Section 7)
- ✓ Technical Proposal (See Section 2.5)
- ✓ Pricing (See Section 8)
- ✓ Certificate of Insurance (See Section 5.2)
- ✓ HUB Subcontracting Plan (See Section 5)
- ✓ Respondent's Questionnaire (See Section 7)
- ✓ Non-Collusion Affidavit (See Section 10)
- ✓ Addendums, if applicable

---

**SECTION 4**  
**GENERAL TERMS AND CONDITIONS**

**4.1 General**

These General Terms and Conditions shall be made a part of and govern any Agreement/Purchase Orders resulting from this Request for Proposal.

Each response should be prepared simply and economically, providing a straightforward and concise description of Respondent's ability to meet the requirements of this RFP. Emphasis should be on completeness, clarity of content and responsiveness to the offer requirements.

**In accordance with Texas Education Code 51.9335, Texas A&M University shall make the award based on, but not limited to, the following best value criteria: The purchase price; The reputation of the vendor and of the vendor's goods or services; The quality of the vendor's goods or services; The extent to which the goods or services meet the institution's needs; The vendor's past relationship with the institution; The impact on the ability of the institution to comply with laws and rules relating to historically underutilized businesses and to the procurement of goods and services from persons with disabilities; The total long-term cost to the institution of acquiring the vendor's goods or services; Any other relevant factor that a private business entity would consider in selecting a vendor; and The use of material in construction or repair to real property that is not proprietary to a single vendor unless the institution provides written justification in the request for bids for use of the unique material specified. Additionally, all respondents are hereby notified that Texas A&M shall consider all factors it believes to be relevant in the determination of the "Best Value" including, but not limited to: past experience, references, proposal, and price. Texas A&M's decision is final.**

Responses are to be valid for a minimum of 180 days from the submittal deadline date to allow time for evaluation, selection, and any unforeseen delays.

**4.2 Final Review and Approval**

Failure to comply with the requirements contained in this Request for Proposal may result in the rejection of the proposal.

The vendor agrees to protect the State from claims involving infringement of patents or copyrights.

The vendor hereby assigns to purchaser, any and all claims for overcharges associated with any contract resulting from this RFP which arise under the antitrust laws of the United States 15 U.S.C.A. Section 1, et seq. (1973) and which arise under the antitrust laws of the State of Texas, Texas Business and Commercial Code Ann. Sec. 15.01, et seq. (1967).

Questions should be directed to the Texas A&M Purchasing official identified in Section 3.3 of this Request for Proposal.

Proposals and any other information submitted by Respondent in response to this Request for Proposal shall become the property of Texas A&M.

Texas A&M will not provide compensation to Respondents for any expenses incurred by the Respondent(s) for proposal preparation, product evaluations or demonstrations that may be made, unless otherwise expressly indicated.

Proposals which are qualified with conditional clauses, alterations, items not called for in the RFP documents, or irregularities of any kind are subject to disqualification by Texas A&M at its option.

**4.3 Definitions**

Whenever the following terms are used in these General Terms and Conditions or in other documents the intent and meaning shall be interpreted as follows:

RFP shall mean Request for Proposal.

Proposal shall mean Respondents offer

Texas A&M shall mean Texas A&M University and other system parts.

Respondent shall mean the individual, partnership, corporation, or other entity responding to this RFP.

Vendor shall mean the individual, partnership, corporation, or other entity awarded an agreement for labor or for equipment & supplies under this RFP in accordance with the terms, conditions, and requirements herein.

Agreement shall mean an agreement, documented by written instrument, between Texas A&M and the successful respondent to provide products/services as requested to Texas A&M in College Station, Texas.

#### **4.4 Time of Performance**

Time is of the essence in the rendering of services. Seller agrees to perform all obligations and render services set forth per this proposal.

#### **4.5 Default**

In the event that the Vendor fails to carry out or comply with any of the terms and conditions of the agreement with Texas A&M, Texas A&M may notify the Vendor of such failure or default in writing and demand that the failure or default be remedied within ten (10) days; and in the event that the Seller fails to remedy such failure or default within the ten (10) day period, Texas A&M shall have the right to cancel the agreement upon thirty (30) days written notice.

The cancellation of the Agreement, under any circumstances whatsoever, shall not effect or relieve Vendor from any obligation or liability that may have been incurred or will be incurred pursuant to the agreement and such cancellation by Texas A&M shall not limit any other right or remedy available to Texas A&M at law or in equity.

#### **4.6 Termination**

##### **4.6.1. For Convenience:**

The agreement may be terminated, without penalty, by Texas A&M without cause by giving sixty (60) days written notice of such termination to the seller.

##### **4.6.2. Upon award, the agreement is subject to cancellation, without penalty, either in whole or in part, if funds are not appropriated.**

##### **4.6.3. In no event shall such termination by Texas A&M as provided for under this Section give rise to any liability on the part of Texas A&M including, but not limited to, claims of Vendor for compensation for anticipated profits, unabsorbed overhead, or interest on borrowing. Texas A&M's sole obligation hereunder is to pay Vendor for products and/or services ordered and received prior to the date of termination.**

#### **4.7 Agreement Amendments**

No modification or amendment to the agreement shall become valid unless in writing and signed by both parties. All correspondence regarding modifications or amendments to the agreement must be forwarded to the Texas A&M Purchasing Department for prior review and approval. Only the contract administrator within Strategic Sourcing & Purchasing Services or his/her designee will be authorized to sign changes or amendments.

#### **4.8 Independent Vendor Status**

Vendor agrees that Vendor and Vendor's employees and agents have no employer-employee relationship with Texas A&M. Texas A&M shall not be responsible for the Federal Insurance Contribution Act (FICA) payments, federal or state unemployment taxes, income tax withholding, Workers Compensation Insurance payments, or any other insurance payments, nor will Texas A&M furnish any medical or retirement benefits or any paid vacation or sick leave.

#### **4.9 Right to Audit**

At any time during the term of this agreement and for a period of four (4) years thereafter Texas A&M or duly authorized audit representative of Texas A&M, or the Texas A&M University System, at its expense and at reasonable times, reserves the right to incrementally audit Vendor's records and manufacturer's pricing relevant to all pricing provided under this agreement. In the event such an audit by Texas A&M reveals any errors/overpayments by Texas A&M, Vendor's shall

refund Texas A&M the full amount of such overpayments within thirty (30) days of such audit findings, or Texas A&M at its option, reserves the right to deduct such amounts owing Texas A&M from any payments due Vendor..

#### **4.10 Sales and Use Tax**

Texas A&M, as an agency of the State of Texas, qualifies for exemption from State and Local Sales and Use Taxes pursuant to the provisions of the Texas Limited Sales, Excise, and Use Tax Act. The Seller may claim exemption from payment of applicable State taxes by complying with such procedures as may be prescribed by the State Comptroller of Public Accounts.

#### **4.11 Observance of Texas A&M Rules and Regulations**

Vendor agrees that at all times its employees will observe and comply with all regulations of the University, including but not limited to parking and security regulations.

#### **4.12 Non-Disclosure**

Vendor and Texas A&M acknowledge that they or their employees may, in the performance of the resultant agreement come into the possession of proprietary or confidential information owned by or in the possession of the other. Neither party shall use any such information for its own benefit or make such information available to any person, firm, corporation, or other organizations, whether or not directly or indirectly affiliated with Seller or Texas A&M unless required by law.

#### **4.13 Publicity**

Vendor agrees that it shall not publicize this agreement or disclose, confirm or deny any details thereof to third parties or use any photographs or video recordings of Texas A&M's name in connection with any sales promotion or publicity event without the prior express written approval of Texas A&M.

#### **4.14 Severability**

If one or more provisions of the resultant agreement, or the application of any provision to any party or circumstance, is held invalid, unenforceable, or illegal in any respect, the remainder of the agreement and the application of the provision to other parties or circumstances shall remain valid and in full force and effect.

#### **4.15 Non-Waiver of Defaults**

Any failure of Texas A&M at any time, to enforce or require the strict keeping and performance of any of the terms and conditions of this agreement shall not constitute a waiver of such terms, conditions, or rights, and shall not affect or impair same, or the right of Texas A&M at any time to avail itself of same.

#### **4.16 Governing Law**

This agreement shall be construed and governed by the laws of the State of Texas.

#### **4.17 Intellectual Property**

Pursuant to the Agreement, the University will license specified uses of certain of its intellectual property and assets during the Term of the Agreement, as contemplated herein. However, Texas A&M shall, in all cases, retain exclusive ownership of any and all such intellectual property and assets, including any and all derivative property and assets developed during the Term of the Agreement. The Proposer shall acknowledge Texas A&M's ownership of its intellectual property in the Agreement and shall agree to assign any and all such intellectual property to Texas A&M at the expiration or termination of the Agreement, if requested by Texas A&M.

---

## SECTION 5 CONTRACTUAL REQUIREMENTS

### 5.1 Texas Public Information Act

Respondent acknowledges that Texas A&M University is obligated to strictly comply with the Public Information Act, Chapter 552, Texas Government Code, in responding to any request for public information pertaining to this Agreement, as well as any other disclosure of information required by applicable Texas law. Upon Respondent's written request, respondent will promptly provide specified contracting information exchanged or created under any resultant agreement for or on behalf of Texas A&M University. Respondent acknowledges that Texas A&M University may be required to post a copy of the fully executed Agreement on its Internet website in compliance with Section 2261.253(a)(1), Texas Government Code. The requirements of Subchapter J, Chapter 552, Texas Government Code, may apply to this Agreement and Respondent agrees that this Agreement can be terminated if Respondent knowingly or intentionally fails to comply with a requirement of that subchapter.

### 5.2 Insurance Requirements

- 5.2.1. The successful vendor will be required per the indicated requirements (Attachment E) to provide proof of insurance prior to beginning any work on the campus of Texas A&M University. The vendor will be held strictly liable for any damages to Texas A&M University property occurring during any installation.
- 5.2.2. Vendor shall not commence work until all the insurance specified hereunder has been obtained and certificates of such insurance have been filed with and accepted by Texas A&M University. Insurance coverage shall provide for a thirty-day notice of cancellation or material change to the policy coverage and/or limits and the certificate of insurance enforce must include a notice that the policy or policies do contain these provision. Acceptance of insurance certificates by Texas A&M University shall not relieve or decrease the liability of the vendor. Unless otherwise specified, the vendor shall provide and maintain, until the work included in this Request for Proposal is completed an accepted by Texas A&M University.
- 5.2.3. Certificates of Insurance must be delivered or mailed to:  
Texas A&M University Board of Regents  
Attn: Procurement Services  
P.O. Box 30013  
College Station, TX 77842-3013.

### 5.3 Indemnification

Vendor agrees to indemnify and hold the State of Texas, the Board of Regents of Texas A&M University System, Texas A&M, their officers, employees, and agents (the Indemnified Parties) harmless from and indemnify each against any and all liabilities, actions, damages, suits, proceedings, judgments, and costs (excluding attorney's fees) for claims resulting from the acts or omissions of Seller or the acts or omissions of others under Seller's supervision and control.

### 5.4 Other Benefits

It is understood and agreed that no benefits, payments or considerations received by vendor for the performance of services associated with and pertinent to the resultant agreement shall accrue, directly or indirectly, to any employees, elected or appointed officers or representatives, or any other person identified as agents of, or who are by definition an employee of the State.

### 5.5 Alternative Dispute Resolution

The dispute resolution process provided in Chapter 2260, Texas Government Code, and the related rules adopted by the Texas Attorney General pursuant to Chapter 2260, shall be used by Owner and Company to attempt to resolve any claim for breach of contract made by Company that cannot be resolved in the ordinary course of business. Company shall submit written notice of a claim of breach of contract under this Chapter to the University Contracts Officer, Texas A&M University, who shall examine Company's claim and any counterclaim and negotiate with Company in an effort to resolve the claim.

### 5.6 Prohibition Involving Human Trafficking

A state agency may not accept a proposal or award a contract, including a contract for which purchasing authority is delegated to a state agency, that includes proposed financial participation by a person who, during the five-year period

preceding the date of the proposal or award, has been convicted of any offense related to the direct support or promotion of human trafficking. A proposal award subject to the requirements of this section must include the following statement: "Under Section 2155.0061, Government Code, the vendor certifies that the individual or business entity named in this proposal or contract is not ineligible to receive the specified contract and acknowledges that this contract may be terminated and payment withheld if this certification is inaccurate."

#### **5.7 Not Eligible for Rehire**

Respondent is responsible to ensure that employees participating in work for Texas A&M University have not been designated by The Texas A&M University System ("TAMUS") as Not Eligible for Rehire as defined in TAMUS Policy 33.02, Section 4. Non-conformance to this requirement may be grounds for termination of this Agreement or any resultant agreement.

#### **5.8 Boycotting Israel**

To the extent that Texas Government Code, Chapter 2271 applies to this Agreement, Respondent certifies that (a) it does not currently boycott Israel; and (b) it will not boycott Israel during the term of this Agreement. Respondent acknowledges this Agreement may be terminated and payment withheld if this certification is inaccurate.

#### **5.9 Business with Certain Countries and Organizations**

Pursuant to Subchapter F, Chapter 2252, Texas Government Code Respondent certifies it is not engaged in business with Sudan, Iran or a foreign terrorist organization. Respondent acknowledges its purchase order and/or contract with TAMU may be terminated and payment withheld if this certification is inaccurate

#### **5.10 Billing Resolutions**

In the case of a problem on a disputed invoice or charge, the Respondent will provide necessary information, i.e. duplicate invoice, shipping information and proof of delivery at no extra charge to Texas A&M within 5 business days of request. All credit memos will reflect the purchase order number and the original invoice number in which charge was initiated.

#### **5.11 Payment**

Payment schedule to be agreed upon prior to formal execution of agreement.

Payment shall be made within thirty (30) days after acceptance of goods and/or services and receipt of invoice, whichever is later, and according to the agreed upon schedule. Texas A&M will incur no penalty for late payment if payment is made in 30 or fewer days from receipt of goods or services and an uncontested invoice.

Texas A&M may withhold any moneys claimed to be due by the Respondent until the terms of the Agreement have been fulfilled and the work of the Respondent has been accepted.

#### **5.12 HUB Subcontracting Plan**

It is the policy of the State of Texas and Texas A&M University (Texas A&M) to encourage the use of Historically Underutilized Businesses (HUBs) in our prime contracts, subcontractors, and purchasing transactions. The goal of the HUB Program is to promote equal access and equal opportunity in TAMU contracting and purchasing.

Subcontracting opportunities are anticipated for this Invitation for Bid/Request for Proposal and therefore a HUB Subcontracting Plan (HSP) is required. Failure to submit a comprehensive, acceptable HSP will be considered a material failure to comply with the requirements of the Invitation for Bid/Request for Proposal and will result in rejection of the submittal. The HUB Subcontracting Plan shall be submitted with the Invitation for Bid/Request for Proposal response by the date and time specified.

For information regarding the HUB Subcontracting Plan requirements, please contact Cindy Gillar at 979- 845-9010 or via email at [c-gillar@tamu.edu](mailto:c-gillar@tamu.edu). Documents attached are the State of Texas HUB Subcontracting Plan form, HSP Quick Checklist, and Prime Contractor Progress Assessment Report (PAR) form. The State of Texas HSP forms can also be found at the following site: <http://www.window.state.tx.us/procurement/prog/hub/hub-forms>

SECTION 6

EXECUTION OF OFFER

RFP MAIN 20-0029; HPC Storage System

In compliance with this RFP, and subject to all the conditions herein, the undersigned offers and agrees to furnish any or all commodities or services at the prices quoted.

6.1 Proposer Affirmation

Signing this proposal with a false statement is a material breach of contract and shall void the submitted proposal or any resulting contracts, and the proposer may be removed from all proposal lists. By signature hereon affixed, the proposer hereby certifies that:

- 6.1.1. The proposer has not given, offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor, or service to a public servant in connection with the submitted proposal.
6.1.2. The proposer is not currently delinquent in the payment of any franchise tax owed the State of Texas.
6.1.3. Pursuant to Section 2155.004 Government Code, relating to collection of state and local sales and use taxes, the proposer certifies that the individual or business entity named in this proposal is not ineligible to receive the specified contract and acknowledges that this contract may be terminated and/or payment withheld if this certification is inaccurate.
6.1.4. Neither the proposer nor the firm, corporation, partnership or institution represented by the proposer, or anyone acting for such firm, corporation or institution has violated the antitrust laws of this State, codified in Section 15.01, et seq., Texas Business and Commerce Code, or the Federal Antitrust Laws, nor communicated directly or indirectly the proposal made to any competitor or any other person engaged in such line of business.
6.1.5. The proposer has not received compensation for participation in the preparation of the specifications for this Invitation for Proposal.
6.1.6. The proposer shall defend, indemnify, and hold harmless the State of Texas, all of its officers, agents and employees from and against all claims, actions, suits, demands, proceedings costs, damages, and liabilities, from any acts or omissions of proposer or any agent, employee, sub-Contractor, or proposer of proposer in the execution or performance of this purchase order.
6.1.7. Proposer agrees that any payments due under this contract will be applied towards any debt, including but not limited to delinquent taxes and child support that is owed to the State of Texas.
6.1.8. Proposer certifies that they are in compliance with section 669.003 of the Government Code, relating to contracting with executive head of a State agency. If section 669.003 applies, proposer will complete the following information in order for the proposal to be evaluated:

Name of Former Executive: \_\_\_\_\_
Name of State Agency: \_\_\_\_\_
Date of Separation from State Agency: \_\_\_\_\_
Position with Proposer: \_\_\_\_\_
Date of Employment with Proposer: \_\_\_\_\_

- 6.1.9. Proposer agrees to comply with Government Code 2155.4441, pertaining to service contract use of products produced in the State of Texas.

6.2 Texas Family Code Section 231.006

Ineligibility to Receive State Grants or Loans, or Receive Proposals or Payments on State Contracts.

- 6.2.1. A child support obligor who is more than 30 days delinquent in paying child support and a business entity in which the obligor is a sole proprietor, partner, shareholder, or owner with an ownership interest of at least 25 percent is not eligible to:
6.2.1.1. receive payments from state funds under a contract to provide property, materials, or services: or
6.2.1.2. receive a state-funded grant or loan.
6.2.2. A child support obligor or business entity ineligible to receive payments under Subsection (a) remains ineligible until:
6.2.2.1. all arrearages have been paid; or
6.2.2.2. the obligor is in compliance with a written repayment agreement or court order as to any existing delinquency.
6.2.3. Pursuant to Section 231.006 (c), Family Code, proposal should include name and Social Security number of each person with at least 25% ownership of the business entity submitting the proposal. Proposers that have pre-registered this information on the GSC Centralized Master Proposers List have satisfied this requirement. If not pre-registered, attach name & social security number for each person. Otherwise this information must be provided prior to contract award.
6.2.4. "Pursuant to Section 231.006, Family Code, re: child support, the proposer certifies that the individual or business entity named in this proposal is not ineligible to receive the specified payment and acknowledges that this contract may be terminated and payment may be withheld if this certification is inaccurate."
6.2.5. If a state agency determines that an individual or business entity holding a state contract is ineligible to receive payment under Section (a) the contract may be terminated.
6.2.6. If the certificate required under Subsection (d) is shown to be false, the vendor is liable to the state for attorney's fees, the costs necessary to complete the contract, including the cost of advertising and awarding a second contract, and any other damages provided by law or contract.

Added by Acts 1995, 74th Leg., ch. 20, Sec. 1, eff. April 20, 1995. Amended by Acts 1995, 74th Leg., ch. 751, Sec. 82, eff. Sept. 1, 1995.

**EXECUTION OF OFFER**  
(continued)

**6.3 Substitute W-9**

Texas A&M University requires all companies and individuals (not employees or students) to have a Substitute W-9 form on file. This form is needed for IRS compliance.

Step 1: You can obtain the Substitute W-9 form from the Texas A&M University Financial Management Services website at: <https://fmo.tamu.edu/media/395081/substitute-w9-2019.pdf>

Step 2: Vendor must fill out the form completely and mail the original to:

Texas A&M University  
Financial Management Services  
Accounts Payable  
6000 TAMU  
College Station, TX. 77843-6000

**6.4 Direct Deposit**

All vendors are encouraged to sign up for direct deposit. The direct deposit form is located at: <https://fmo.tamu.edu/media/395081/substitute-w9-2019.pdf>

**6.5 Signature**

Proposal should give Payee Identification Number (PIN) (Formerly Vendor ID), full firm name and address of proposer (enter in block provided if not shown). Failure to manually sign proposal will disqualify it. The person signing the proposal should show title or authority to bind his/her firm in contract. The Payee Identification Number is the taxpayer number assigned and used by the Comptroller of Public Accounts of Texas. Enter this number in the spaces provided on the Execution of Offer.

This offer consists of pages number (1) through

Payee Identification Number (PIN): \_\_\_\_\_

Sole Owner should also enter social security No.: \_\_\_\_\_

Proposer/Company: \_\_\_\_\_

**Signature (INK):** \_\_\_\_\_

Name (Typed/Printed): \_\_\_\_\_

Title: \_\_\_\_\_

Street: \_\_\_\_\_

City/State/Zip: \_\_\_\_\_

Telephone No.: \_\_\_\_\_

Fax No.: \_\_\_\_\_

E-mail: \_\_\_\_\_

Other preferences as defined in TAC Title 34, Part 1, Chapter 20, Subchapter C Rule 20.38 (check any that are applicable)

- Supplies, materials, equipment, or services produced in TX/ offered by TX bidders
- Agricultural products produced or grown in TX
- Agricultural products and services offered by TX bidders
- USA produced supplies, materials, or equipment
- Products of persons with mental or physical disabilities
- Products made of recycled, remanufactured, or environmentally sensitive materials including recycled steel
- Energy efficient products
- Rubberized asphalt paving material
- Recycled motor oil and lubricants
- Products produced at facilities located on formerly contaminated property
- Products and services from economically depressed or blighted areas

**THIS SHEET MUST BE COMPLETED, SIGNED, AND RETURNED WITH RESPONDENT'S PROPOSAL. FAILURE TO SIGN AND RETURN THIS SHEET WILL RESULT IN THE REJECTION OF YOUR PROPOSAL.**

---

**SECTION 7**  
**RESPONDENT'S QUESTIONNAIRE/COMPANY EXPERIENCE**

The Respondent recognizes that in selecting a supplier, Texas A&M will rely, in part, on the answers provided in response to this Section 7. Accordingly, Respondent warrants to the best of its knowledge that all responses are true, correct and complete. Texas A&M reserves the right to contact each and every reference listed below and shall be free from any liability to respondent for conducting such inquiry.

**7.1 Company Profile**

a. Number of Years in Business: \_\_\_\_\_

Type of Operation: Individual \_\_\_\_\_ Partnership \_\_\_\_\_ Corporation \_\_\_\_\_ Government \_\_\_\_\_

**Number of Employees:** \_\_\_\_\_ (company wide)

**Number of Employees:** \_\_\_\_\_ (servicing location)

Annual Sales Volume: \_\_\_\_\_ (company wide)

Annual Sales Volume: \_\_\_\_\_ (servicing location)

- b. Provide any details of all past or pending litigation or claims filed against your company that would negatively impact your company's performance under an agreement with Texas A&M.
- c. Is your company currently in default on any loan agreement or financing agreement with any bank, financial institution, or other entity. If yes, specify date(s), details, circumstances, and prospects for resolution.
- d. Provide names of members that will be assigned to fulfill the scope of this project and include relevant certifications and experience of each of the members.

**7.2 References**

Provide a listing of at least four (4) references with which your company has had a relevant contractual relationship with at any time in the past five (5) years, to include:

- Name of business
- Contact person from that organization in charge of the contract. Include name, title, telephone number and e-mail address of this individual.
- Explain in general terms what was provided

Respondents shall include references for universities of similar size where similar assessments were conducted as listed in your proposal.

Texas A&M University reserves the right to call to verify that similar services were provided and inquire about the reliability of the proposer's performance history. A negative reference may be grounds for disqualification.

---

**Section 8  
PRICING****8.1 Pricing**

Respondent shall provide pricing for each of the following items:

8.2.1 Provide pricing for the entire solution, with cost broken into the following components where applicable:

- 8.2.1.1 Cost of core storage hardware (controllers, servers, etc.)
- 8.2.1.2 Cost of any included networking (IB & ethernet cables, switches, etc.)
- 8.2.1.3 Cost of software stack, licensing
- 8.2.1.4 Cost of hardware and software maintenance for years 1 through 3
- 8.2.1.5 Cost of training course registration for one introductory & possibly one advanced course

The pricing proposal for the above configurations shall be provided according to the following payment options:

- 100% payment after delivery, installation and formal acceptance by TAMUQ
- 8.2.2 Alternatively, provide pricing exactly as in 8.2.1, but include only maintenance costs for year one under 8.2.1.4. Provide annual maintenance pricing for years 2 & 3 separately with TAMUQ committing to paying those costs in the 2nd and 3rd years (respectively) of the system's life. Proposals that offer this alternate pricing arrangement shall be viewed favorably.
- 8.2.3 Provide pricing for the optional extension of hardware and software maintenance for the storage system on an annual basis for years 4 and 5. The vendor must commit to be bound -- without exception -- to these maintenance renewal prices in the event that TAMUQ chooses to renew maintenance for years 4 and 5.
- 8.2.4 Provide pricing for the optional upgrade of system capacity and/or performance as requested in section 2.4.3.

## SECTION 9 EVALUATION CRITERIA FOR AWARD

### 9.1 Evaluation Information

Texas A&M University will utilize an evaluation team for the evaluation of this RFP. Texas A&M University will evaluate and make the award on the proposal that is determined to be the “Best Value” to the State based on, but not limited to the criteria listed above.

All proposals must be complete and convey all of the information requested to be considered responsive. If the proposal fails to conform to the essential requirements of the RFP, Texas A&M alone will determine whether the variance is significant enough to consider the proposal susceptible to being made acceptable and therefore a candidate for further consideration, or not susceptible to being made acceptable and therefore not considered for award.

By submitting a proposal, Respondent acknowledges and accepts [a]the evaluation process, [b] the evaluation factors listed in the RFP Questionnaire, [c] the scope of this engagement (**Section 1**), [d] the terms and conditions of the Agreement (**Section 4**), [e] all other requirements and specifications set forth in this RFP, and [e] that some subjective judgments must be made by the University during this RFP process.

Should Texas A&M be unable to agree on final Agreement terms and conditions with the highest ranked proposer, a Texas A&M representative(s) will then negotiate with the second-ranked proposer or reissue the same or modified version of this RFP.

**Texas A&M University reserves the right to reject any and all proposals.**

### 9.2 Demonstration/Presentation

During evaluation, Texas A&M may request an on-site demonstration/presentation of proposer(s). The team may consider the demonstration/presentation in the evaluation criteria. The purpose of the on-site demonstration/presentations is for clarification or to amplify the materials presented in any part of your submission. However, vendors are cautioned that the evaluators are not required to request clarification; therefore, all submissions should be complete and reflect the most favorable terms available from the offer.

### 9.3 Evaluation Criteria and Weights

Each proposal shall be evaluated on the ability to meet the university’s minimum requirements in Section 2 and to provide the best value to the University. Proposal shall be evaluated by assigning points to each of the items below. The maximum number of points that can be assigned to each item being evaluated are as follows:

| Evaluation Criteria                              | Criteria Definition  | Possible Points |
|--|--|-----------------|
| System Requirements                              | The vendor’s ability to meet or exceed mandatory and desirable requirements (sec 2.4). (mandatorics = 20%, desirables = 10%, upgrade desirables = 10%)                   | 40              |
| Company Experience and Background in HPC (sec 7) | The vendor’s qualifications and record to execute successfully the installation and service/support plan.  | 15              |
| Administrator Training Credits                   | The extent to which the vendor offers credits, using which a TAMUQ sys admin may enroll in formal, hands-on training classes taught by the vendor (sec 2.4.2).           | 5               |
| Pricing (sec 8)                                  | The overall cost: hardware, software, installation, configuration, maintenance (including its renewal for years 4 & 5), system upgrade, and training course registration | 40              |
| <b>Total</b>                                     |  | <b>100</b>      |

**SECTION 10  
NON-COLLUSION AFFIDAVIT**

The undersigned, duly authorized to represent the persons, firms and corporations joining and participating in the submission of the foregoing Proposal (such persons, firms and corporations hereinafter being referred to as the "RESPONDENT"), being duly sworn, on his or her oath, states that to the best of his or her belief and knowledge no person, firm or corporation, nor any person duly representing the same joining and participating in the submission of the foregoing Proposal, has directly or indirectly entered into any agreement or arrangement with any other RESPONDENTS, or with any official of TEXAS A&M or any employee thereof, or any person, firm or corporation under contract with TEXAS A&M whereby the RESPONDENT, in order to induce acceptance of the foregoing Proposal by said TEXAS A&M, has paid or is to pay to any other RESPONDENT or to any of the aforementioned persons anything of value whatever, and that the RESPONDENT has not, directly or indirectly entered into any arrangement or agreement with any other RESPONDENT or RESPONDENTS which tends to or does lessen or destroy free competition in the letting of the contract sought for by the foregoing Proposal.

The RESPONDENT hereby certifies that neither it, its officers, partners, owners, providers, representatives, employees and parties in interest, including the affiant, have in any way colluded, conspired, connived or agreed, directly or indirectly, with any other RESPONDENT, potential RESPONDENT, firm or person, in connection with this solicitation, to submit a collusive or sham bid, to refrain from bidding, to manipulate or ascertain the price(s) of other RESPONDENTS or potential RESPONDENTS, or to obtain through any unlawful act an advantage over other RESPONDENTS or TEXAS A&M.

The prices submitted herein have been arrived at in an entirely independent and lawful manner by the RESPONDENT without consultation with other RESPONDENTS or potential RESPONDENTS or foreknowledge of the prices to be submitted in response to this solicitation by other RESPONDENTS or potential RESPONDENTS on the part of the RESPONDENT, its officers, partners, owners, providers, representatives, employees or parties in interest, including the affiant.

**CONFLICT OF INTEREST**

The undersigned RESPONDENT and each person signing on behalf of the RESPONDENT certifies, and in the case of a sole proprietorship, partnership or corporation, each party thereto certifies as to its own organization, under penalty of perjury, that to the best of their knowledge and belief, no member of TEXAS A&M, nor any employee, or person, whose salary is payable in whole or in part by TEXAS A&M, has a direct or indirect financial interest in the award of this Proposal, or in the services to which this Proposal relates, or in any of the profits, real or potential, thereof, except as noted otherwise herein.

Signature \_\_\_\_\_

Respondent Name \_\_\_\_\_

Date \_\_\_\_\_

\_\_\_\_\_  
Subscribed and sworn to before me this  
\_\_\_\_\_ day of \_\_\_\_\_, 2014.

Notary Public in and for the County of \_\_\_\_\_, State of  
\_\_\_\_\_. My commission expires: \_\_\_\_\_

**AFFIDAVIT MUST BE COMPLETED, SIGNED, AND RETURNED WITH RESPONDENT’S PROPOSAL. FAILURE TO SIGN AND RETURN THIS SHEET MAY RESULT IN THE REJECTION OF YOUR PROPOSAL.**

**NOTE: Due to events surrounding COVID19; the notary requirement has been waived. Respondents must sign, date and return form with proposal response or your response will be disqualified.**

**Appendix A – Insurance Requirements**

[Vendor] shall obtain and maintain, for the duration of this Agreement or longer, the minimum insurance coverage set forth below. With the exception of Professional Liability (E&O), all coverage shall be written on an occurrence basis. All coverage shall be underwritten by companies authorized to do business in the State of Texas or eligible surplus lines insurers operating in accordance with the Texas Insurance Code and have a financial strength rating of A- or better and a financial strength rating of VII or better as measured by A.M. Best Company or otherwise acceptable to Texas A&M University. By requiring such minimum insurance, the Owner shall not be deemed or construed to have assessed the risk that may be applicable to [Vendor] under this Agreement. [Vendor] shall assess its own risks and if it deems appropriate and/or prudent, maintain higher limits and/or broader coverage. [Vendor] is not relieved of any liability or other obligations assumed pursuant to this Agreement by reason of its failure to obtain or maintain insurance in sufficient amounts, duration, or types. No policy will be canceled without unconditional written notice to Texas A&M University at least ten days before the effective date of the cancellation.

**Insurance:**

| <b>Coverage</b> | <b>Limit</b> |
|-----------------|--------------|
|-----------------|--------------|

**A. Worker’s Compensation**

|                                  |                                  |
|----------------------------------|----------------------------------|
| Statutory Benefits (Coverage A)  | Statutory                        |
| Employers Liability (Coverage B) | \$1,000,000 Each Accident        |
|                                  | \$1,000,000 Disease/Employee     |
|                                  | \$1,000,000 Disease/Policy Limit |

Workers’ Compensation policy must include under Item 3.A. on the information page of the workers’ compensation policy the state in which work is to be performed for Texas A&M University. Workers’ compensation insurance is required, and no “alternative” forms of insurance will be permitted

**B. Automobile Liability**

Business Auto Liability Insurance covering all owned, non-owned or hired automobiles, with limits of not less than \$1,000,000 Single Limit of liability per accident for Bodily Injury and Property Damage;

**C. Commercial General Liability**

|                                 |             |
|---------------------------------|-------------|
| Each Occurrence Limit           | \$1,000,000 |
| General Aggregate Limit         | \$2,000,000 |
| Products / Completed Operations | \$1,000,000 |
| Personal / Advertising Injury   | \$1,000,000 |
| Damage to rented Premises       | \$300,000   |
| Medical Payments                | \$5,000     |

The required commercial general liability policy will be issued on a form that insures [Vendor’s] or its subcontractors’ liability for bodily injury (including death), property damage, personal and advertising injury assumed under the terms of this Agreement.

**Additional Endorsements**

The Auto and Commercial General Liability Policies shall name the Texas A&M University System Board of Regents for and on behalf of The Texas A&M University System and the Texas A&M University as additional insured’s.

**D.** [Vendor] will deliver to Texas A&M University:

Evidence of insurance on a Texas Department of Insurance approved certificate form verifying the existence and actual limits of all insurance after the execution and delivery of this Agreement and prior to the performance of any services by [Vendor] under this Agreement. Additional evidence of insurance will be provided on a Texas Department of Insurance approved certificate form verifying the continued existence of all required insurance no later than thirty (30) days after each annual insurance policy renewal.

All insurance policies, with the exception of worker’s compensation and employer’s liability will be endorsed and name The Board of Regents for and on behalf of The Texas A&M University System, The Texas A&M University System and Texas A&M University as Additional Insured up to the actual liability limits of the policies maintained by [Vendor]. Commercial General Liability and Business Auto Liability will be endorsed to provide primary and non-contributory coverage. The Commercial General Liability Additional Insured endorsement will include on-going and completed operations and will be submitted with the Certificates of Insurance.

All insurance policies will be endorsed to provide a waiver of subrogation in favor of The Board of Regents of The Texas A&M University System, The Texas A&M University System and Texas A&M University. No policy will be canceled without unconditional written notice to Texas A&M University at least ten days before the effective date of the cancellation. All insurance policies will be endorsed to require the insurance carrier providing coverage to send notice to Texas A&M University ten (10) days prior to the effective date of cancellation, material change, or non-renewal relating to any insurance policy required in this section.

Any deductible or self-insured retention must be declared to and approved by Texas A&M University prior to the performance of any services by [Vendor] under this Agreement. [Vendor] is responsible to pay any deductible or self-insured retention for any loss. All deductibles and self-insured retentions will be shown on the Certificates of Insurance.

Certificates of Insurance and Additional Insured Endorsements as required by this Agreement will be mailed, faxed, or emailed to the following Texas A&M University contact:

Name:

Address:

Facsimile Number:

Email Address:

The insurance coverage required by this Agreement will be kept in force until all services have been fully performed and accepted by Texas A&M University in writing.

---

**Attachment A – HUB Subcontracting Plan**

**The HUB Subcontracting Plan  
Pages 1-10**

All respondents are required to return a HUB Subcontracting Plan with their proposal. Failure to return a HUB Plan or if HUB Plan is not approved, your entire response will be disqualified.

Helpful Contact:

Cindy Gillar, HUB Coordinator  
[c-gillar@tamu.edu](mailto:c-gillar@tamu.edu)  
979-845-9010