



THE UNIVERSITY OF ALABAMA IN HUNTSVILLE  
 PROCUREMENT SERVICES  
 301 SPARKMAN DRIVE  
 HUNTSVILLE, ALABAMA 35899  
 PHONE (256) 824-6484

DATE  
 09/26/08

BID NUMBER  
 B001819

RESPONSE DUE BY:

10/10/08  
 1:30 PM

ALL BIDS WILL BE PUBLICLY OPENED ON THE OPENING DATE DESIGNATED AT THE UNIVERSITY OF ALABAMA IN HUNTSVILLE, PROCUREMENT SERVICES, BUSINESS SERVICES BLDG., HUNTSVILLE, ALABAMA 35899. BIDS RECEIVED AFTER THE SPECIFIED TIME ON THE OPENING DATE WILL NOT BE CONSIDERED.

**REQUEST FOR FORMAL BID**

**WHEN USING FEDEX, UPS, OR ANY EXPRESS PACKAGING/SHIPPING, THE BID NUMBER MUST BE CLEARLY PRINTED ON THE AIR BILL.**

CONTACT  
 JOY MOODY

PHONE  
 256-824-6489

VENDOR NO.  
 «vendornum»

**INSERT VENDOR INFORMATION**

V  
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**ALL BIDS MUST BE SIGNED, SEALED, AND RETURNED IN AN ENVELOPE WITH THE BID NUMBER AND OPENING DATE NOTED ON FRONT. FORWARD ALL BIDS TO THE ADDRESS INDICATED ABOVE. FAILURE TO COMPLY WILL RESULT IN A "NO BID" RESPONSE IN ACCORDANCE WITH ALABAMA COMPETITIVE BID LAW 41-16-24 sub-part b.**

**THE ABOVE BID NUMBER MUST APPEAR ON ALL BIDS AND RELATED CORRESPONDENCE**

OR EQUAL, REFER TO GENERAL CONDITIONS ON ATTACHED SHEET

NO	QUANTITY	UNIT	DESCRIPTION	UNIT PRICE	EXTENSION
01			<p>THE UNIVERSITY OF ALABAMA IN HUNTSVILLE REQUESTS BIDS FOR <b>ASUPERCOMPUTER COMPUTER CLUSTER</b> AS PER THE ATTACHED SPECIFICATIONS.</p> <p>DELIVERY WILL BE A FACTOR IN DETERMINING THE AWARD OF THIS BID. QUOTE EARLIEST POSSIBLE DELIVERY: _____.</p>		
02			<p>THE UNIVERSITY OF ALABAMA IN HUNTSVILLE IS A MEMBER OF THE E&amp;I COOPERATIVE AND IS ENTITLED TO RECEIVE ANY DISCOUNTS OFFERED TO THIS ORGANIZATION.</p> <p><b><u>BID PRICES ARE TO INCLUDE ALL SHIPPING CHARGES.</u></b> (FOB: Destination)</p> <p>IF YOU HAVE ANY QUESTIONS SEND TO KESHIA ASKEW VIA EMAIL AT: <a href="mailto:JOY.E.MOODY@UAH.EDU">JOY.E.MOODY@UAH.EDU</a>. REFERENCE BID <b>B001819</b> IN THE SUBJECT LINE OF THE EMAIL.</p> <p><b>AWARD:</b> NO AWARD INFORMATION WILL BE MADE AVAILABLE BY TELEPHONE, FAX, MAIL, OR EMAIL. ONCE THE BID IS AWARDED, THE AWARD INFORMATION AND TABULATION WILL BE POSTED TO OUR WEBSITE: <a href="http://WWW.UAH.EDU/ADMIN/BUSSVCS">WWW.UAH.EDU/ADMIN/BUSSVCS</a> SELECT VENDORS, THEN BID AWARDS</p>		

SHOULD A PURCHASE ORDER BE ISSUED, THE FOREGOING AND THE TERMS AND CONDITIONS ON THE ATTACHED SHEET SHALL BE APPLICABLE AND BINDING UPON THE VENDOR. I ACKNOWLEDGE THAT I HAVE SIGNATURE AUTHORITY TO SIGN ON BEHALF OF THE COMPANY AND HEREBY AGREE TO ALL GENERAL CONDITIONS OF THIS BID REQUEST.

**TOTAL** →

SIGNATURE \_\_\_\_\_  
 COMPANY REPRESENTATIVE

DATE \_\_\_\_\_  
 An Affirmative Action/Equal Opportunity Institution

## BID B001819 SPECIFICATIONS

**Bids must be accompanied by a certified or cashier check or bid bond in the amount not less than five percent (5%) of base bid or not to exceed \$10,000.00.**

**BID PRICES ARE TO INCLUDE ALL SHIPPING CHARGES. (FOB: Destination)**

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE RESERVES THE RIGHT TO INCREASE OR DECREASE QUANTITIES ACCORDING TO AVAILABILITY OF FUNDS UNTIL MARCH 31, 2009.

THE UNIVERSITY OF ALABAMA IN HUNTSVILLE REQUESTS BIDS FOR **A HIGH-PERFORMANCE DISTRIBUTED-MEMORY (CLUSTER) COMPUTING SYSTEM WITH A HIGHSPEED NETWORK CONNECTING THE NODES TOGETHER. THE CLUSTER WILL BE RUNNING THE LINUX OPERATING SYSTEM AND VARIOUS CUSTOM SOFTWARE** AS PER THE SPECIFICATIONS BELOW. THE VENDOR IS TO PROVIDE A DETAILED CONFIGURATION AND COST BREAKDOWN FOR ALL AVAILABLE OPTIONS ACCORDING TO THESE SPECIFICATIONS.

1. General Cluster configurations \$\_\_\_\_\_ \$\_\_\_\_\_
  - The cluster will be of a blade design, contain a minimum of 384 processor cores.
  - The cluster will have between 48 and 51 blades installed in blade enclosure.
  - Will be housed in one supplied rackmount enclosure/cabinet
  - In addition to the compute nodes/blades will have one master node (see sect. 3 below).
  - All blades/nodes must be connected via Infiniband. Substituting other networking options is not acceptable.
  
2. Blade configuration
  - Each blade will have 2 quad-core Intel Xeon CPUs running at the minimum rated speed of 2.66 GHz.
  - Each blade will have 16 Gbytes of ECC RAM, rated DDR2-667 or faster.
  - Blades will have no hard drives or other magnetic or optical storage devices.
  - Each blade will have at least one Infiniband network adapter (dual Infiniband adapters may be considered) plus one Ethernet network adapter. Because the compute nodes are diskless, the Ethernet adapter must be able to boot the node via the Preboot eXecution Environment (PXE) protocol.
  - Each blade may include a (possibly very basic) graphic adapter.
  - Blades must have an accessible connector (e.g., on its front panel) for keyboard and/or monitor.
  - Rackmount blade enclosures to house individual blade modules must be provided.
  
3. Master node configuration
  - The master node will have 2 quad-core Intel Xeon CPUs running at the minimum rated speed of 2.66 GHz.
  - The master node will have 32 Gbytes of ECC RAM, rated DDR2-667 or faster.
  - Contain one 250 Gbyte SATA hard disk (10,000 RPM or faster) plus 2 (two) 500 Gbyte SATA hard disks (10,000 RPM or faster).
  - Have one optical DVDRW drive.
  - Include at least one Infiniband network adapter plus 2 (two) Ethernet network adapters (one for local (cluster) network, the other for the outside Internet connection).
  - The master node will have a graphic adapter with a DVI output.
  - Include a set of connectors for keyboard, mouse, USB, Ethernet, and monitor.
  - It is desirable (but not required) that the master node be in its separate rackmount enclosure. Designs where one of the blades serves as the master node will not be ruled out.

4. Storage
  - The cluster will have a total of approximately 5 Tbytes magnetic storage in SATA or SAS hard disks (7,200 RPM or faster), not counting the disks mentioned in 3.3 above. These disks may be housed either inside the master node or in a separate enclosure. It is desirable that the disks are hot-swappable.
  - The disks may be connected to a hardware RAID controller that could be a part of the master node.
5. Networking
  - 5.1 In addition to Ethernet and Infiniband adapters mentioned in 2.4 and 3.5, the cluster will include Ethernet and Infiniband switching hardware as required for proper connectivity. Switches may be installed inside blade enclosures or as separate rackmount modules. Preference will be given to designs with better node-to-node connectivity, but also with fewer cables to connect.
  - Ethernet and Infiniband cables and/or connectors must be provided, if required.
6. Power and cooling
  - Power supplies will be provided, as required to deliver power to all components. These could be built into the blade enclosures or housed in separate rackmount units.
  - The cluster will have adequate cooling capacity to keep the electronic components at their proper operating temperature. Cooling may be provided by a combination of fans, heatsinks, and other devices.
  - Power cords and/or other connectors will be included, as required.
7. Software
  - A customized version of Linux will be installed on the new cluster, therefore no preinstalled operating system (OS) or other software is specified. However, the master node must be delivered with at least a skeletal OS to demonstrate its operation.
8. Other
  - One extra fully configured blade module (sect. 2) will be provided as a spare to replace compute modules in case of a failure.
  - Peripherals external to the “cluster proper”, including keyboards, monitors, mice, etc., are not required.
9. Delivery and assembly
  - We recognize that designing and configuring a custom system may take a significant amount of time. Vendors are to specify the amount of time expected between the award and the delivery of the completed product.
  - Vendor may ship the hardware in a disassembled state. Vendor may elect to send representatives to assemble the hardware onsite. Alternatively, campus personnel could perform the assembly provided detailed assembly instructions are included with the system. In the latter case the vendor is expected to provide remote assistance with assembly and installation via phone.
  - All additional hardware necessary for assembly and installation, such as rails, handles, nuts/bolts, etc., must be provided.
10. Warranty and support
  - The cluster should carry a minimum 3 year warranty on all hardware (parts and labor). Stronger warranties and support options (e.g., onsite repair or replacement) will be considered a plus.

## GENERAL CONDITIONS

1. **Award:** The University of Alabama in Huntsville reserves the right to accept or to reject any or all bids and is not necessarily bound to accept the lowest bid if that bid is contrary to the best interest of the University. In making an award, intangible factors such as bidder's service, integrity, facilities, equipment, reputation, and past performance will be weighed along with the quality displayed in the samples submitted. Bids may be awarded either item by item, in products groups, or all or none, whichever appears to be in the best interest of the University. The University reserves the right to waive any or all formalities.
2. **Bid Withdrawal:** No bids may be withdrawn without approval from The University of Alabama in Huntsville Procurement Services. Any requests for withdrawal must be in writing to Procurement Services within five (5) days after opening date with justification for reason of withdrawal. More than two (2) such requests could result in removal from our bid list. No bid may be withdrawn after the issuance of purchase order. If a withdrawal is made after the purchase order is issued, the vendor will be considered in default. Refer to "Default of Contractor".
3. **Prices and Payment Terms:** Bidders should quote applicable cash discounts. The University will not take into consideration in bid evaluation any cash discount of less than thirty (30) days duration. However, we will take advantage of all discounts for which we are eligible. Identify these discounts in your bid response. Bids containing "payment in advance" or "COD" requirements may be rejected.
4. **Applicable Law:** It is agreed this quotation is valid to the extent that it does not violate the constitution or the laws of the State of Alabama.

Bidder represents and warrants that all article and services covered by this bid meet or exceed the safety standards established and promulgated under the Federal Occupational Safety and Health Act of 1970, No. 2006, and its regulations in effect or proposed as of the date of this bid.

The furnishing of materials, supplies, equipment or service to The University of Alabama in Huntsville under this purchase order, contract, solicitation for bids, or construction specification constitutes assurance by the vendor or contractor of his compliance with applicable provisions of and pertinent regulations promulgated under Executive Order 11246, date September 28, 1965 issued by the President of the United States of America, and Public Law 88-352, 88<sup>th</sup> Congress, the "Civil Rights Act of 1964".

5. **Non-Collusion:** Any agreement or collusion among bidders or prospective bidders in restraint of freedom of competition, by agreement to bid at a fixed price or to refrain from bidding, or otherwise, shall render the bids of such bidders void. Each bidder certifies that he has not been a party to such an agreement by signing this bid.
6. **New Products:** Unless specifically called for in the bid, all products for purchase must be new, never previously used, and the current model and/or packaging. No remanufactured, demonstrator, used, or irregular product will be considered for purchase unless otherwise specified in the bid. The manufacturer's standard warranty will apply unless otherwise specified in the bid. All requests should be supplied complete, ready to be installed, including all cabling and connectors where applicable.
7. **Bonds:** Bid and performance security bond, when required will be indicated.
8. **Bid Submission:** Failure to submit a bid on the official UAH form provided for that purpose shall be a cause for rejection of the bid. Return of the complete document is required. Modification of or additions to any portion of the solicitation may be cause for rejection of the bid; however, UAH reserves the right to decide, on a case by case basis, in its sole discretion, whether or not to reject such a bid as non-responsive.

All information shall be entered in ink or typewritten in the appropriate space on the form. Mistakes may be crossed out and corrections inserted before submission of your bid. Corrections shall be initialed in ink by the person signing the bid.

All bids must be signed. Failure to do so will result in rejection of bid.

9. **Delivery:** Time of delivery shall be stated as the number of calendar days following receipt of the order by the vendor, to receipt of the goods by The University of Alabama in Huntsville.

Delivery time may be a criterion in awarding bids. Specify earliest possible delivery after receipt of order.

Failure to deliver within the time vendor specified in the bid will constitute a default and may cause cancellation of the contract. Refer to "Default of Contractor".

All prices quoted are to be F.O.B. delivered to The University of Alabama in Huntsville, Central Receiving Building, 301 Sparkman Drive, Huntsville, Alabama, 35899 (unless another F.O.B. point is stated by the University on bid form). The successful bidder must assume all responsibility for damage in transit. When installation is required, it will be stated. If you are not quoting a delivered price, indicate your shipping point, and provide shipping cost for evaluation purposes.

10. **Bid Terms:** Show unit prices, extensions, and total price. In the event of a discrepancy between the unit price and the extension, the unit price shall govern. Bids shall remain firm for minimum thirty (30) days from date of bid opening and any exception must be clearly stated.
11. **Bid Opening:** Bidders may attend the bid opening, but no information or opinions concerning the ultimate award will be given at the bid opening or during the evaluation process. After the public opening of this bid, the results will not be available to bidders not attending the opening until after an award is made. Bid tabulations can be reviewed by accessing Procurement Services website at <http://www.uah.edu/admin/purchasing/bsindex.htm>. Click on "bid information".
12. **Bids are Public Record:** All bids become a matter of public record at bid award. The University accepts no responsibility for maintaining confidentiality of any information submitted with bid whether labeled confidential or not.
13. **Standards of Quality:** When a material, article or piece of equipment is identified in these specifications by reference to manufacturer's or vendor's name, trade name, catalog and stock numbers, etc., it is intended merely to establish a standard; and, any material, article or equipment of other manufacturer and vendor which will perform equally the duties imposed by the general design, provided the material, article, or equipment proposed, is in the opinion of the Purchasing Agent of equal substance and function. It shall not be purchased or installed by the contractor without the Purchasing Agents' written approval.  
  
The bidder is responsible to clearly and specifically indicate the product being offered and to provide sufficient descriptive literature, catalog cuts and technical detail to enable UAH to determine if the product offered meets the requirements of the invitation. Normally in competitive sealed bidding only the information furnished with the bid will be considered in the evaluation. Failure to furnish adequate data for evaluation purposes may result in declaring a bid nonresponsive. Unless the bidder clearly indicates in its bid that the product offered is an "Equal" product, such bid will be considered to offer the brand name product referenced in the invitation. The University of Alabama in Huntsville will be sole judge of EQUAL items bid.
14. **Vendor Authorization:** Vendor must be an authorized distributor/agent to sell products proposed in this bid request. When it is deemed to be in the best interest of the University, Procurement Services may request an on-site premise visit to examine the facility.
15. **Default of Contractor:** Where the University has determined the contractor to be in default, the University reserves the right to purchase any or all products or services covered by the contract on the open market and to charge the contractor with cost in excess of the contract price. Until such assessed charges have been paid, no subsequent bid from the defaulting contractor will be considered.
16. **Fiscal Funding Clause:** The continuation of this contract is contingent upon the appropriation of funds to fulfill the requirements of the contract by the legislature. If the legislature fails to appropriate sufficient monies to provide the continuation of a contract, the contract shall terminate on the date of the beginning of the first fiscal year for which funds are not appropriated.
17. **Contract Cancellation:** Procurement Services has the right to cancel any contract, in accordance with Purchasing Rules and Regulations, for cause, including, but not limited to, the following: (1) failure to deliver within the contract; (2) failure of the product or service to meet specifications, conform to sample quality, or to be delivered in good condition; (3) misrepresentation by the contractor; (4) fraud, collusion, conspiracy, or other unlawful means of obtaining any contract with the state; (5) conflict of contract provisions with constitutional or statutory provisions of state or federal law; and (6) any other breach of contract.
18. **Warranties:** Should merchandise described on this bid contain a manufacturer's warranty, bidders must state the warranty terms in the space provided on the bid. Bids offered for merchandise when no warranty applies must clearly state: "NO WARRANTY COVERAGE". Warranty information may be criteria in making this award. Failure of bidders to furnish this data may cause rejection of the complete bid as being non-responsive.
19. **Disclosure Statement:** The successful bidder will be required to file with Procurement Services a disclosure statement of relationship between contractors/grantees and employees/officials of the University. This form must be completed prior to issuance of the Purchase Order by The University of Alabama in Huntsville.

**Note:** In order for an alternate bid to be considered, bidders must supply current catalogs or brochures, including pictorials and specifications.

**Please indicate your company classification by circling the appropriate initial:** Small Business (**SB**), a Small Disadvantaged Business (**SD**), a Black Small Disadvantaged Business (**BD**), a Woman-Owned Small Business (**WB**), a Woman-Owned Small Disadvantaged Business (**WD**), a Black Woman-Owned Small Disadvantaged Business (**BW**), a Large Business (**LB**), an Individual (**IN**), Educational (**ED**), Non-Profit (**NP**), a Labor Surplus Area Concern (**LS**), Disabled Veteran-Owned Small Business (**DV**), Veteran-Owned Small Business (**VS**), Historically Underutilized Business Zone (**UZ**), or a Governmental Agency (**GV**).

F.O.B. Point	TERMS	WARRANTY
UAH DESTINATION		
ESTIMATED DELIVERY	YOUR REFERENCE NO.*	QUOTATION EFFECTIVE UNTIL

\* Your company reference number, if applicable with this bid quotation.

**Certification Pursuant To Act No. 2006-557**

**Alabama Law (Section 41-4-116, Code of Alabama 1975)** provides that every bid submitted and contract executed shall contain a certification that the vendor, contractor, and all of its affiliates that make sales for delivery into Alabama or leases for use in Alabama are registered, collecting, and remitting Alabama state and local sales, use, and/or lease tax on all taxable sales and leases into Alabama. By submitting this bid, the bidder is hereby certifying that they are in full compliance with Act No. 2006-557, they are not barred from bidding or entering into a contract pursuant to 41-4-116, and acknowledges that the awarding authority may declare the contract void if the certification is false.

\_\_\_\_\_  
COMPANY NAME (TYPE OR PRINT)

\_\_\_\_\_  
TELEPHONE NUMBER

\_\_\_\_\_  
SIGNER'S NAME (TYPE OR PRINT)

\_\_\_\_\_  
FAX NUMBER

\_\_\_\_\_  
SIGNATURE

\_\_\_\_\_  
DATE

The University of Alabama in Huntsville prohibits the installation of asbestos on its campus. Suppliers and contractors will not supply any equipment, material, or supplies, which contain asbestos without prior written approval.

Failure to designate Bid Number and Opening Date on the outside of your sealed envelope containing your bid and more than one bid submitted in this envelope will result in a "No Bid" response in accordance with Alabama Competitive Bid Law 41-16-24 sub-part b.

The University of Alabama in Huntsville will not accept faxed bids.

Any product that fails to meet the specifications, performance requirements or compatibility requirements will be rejected and returned to the vendor at no cost to the University.

**DISCLOSURE STATEMENT OF  
RELATIONSHIP BETWEEN CONTRACTORS/GRANTEES AND  
EMPLOYEES/OFFICIALS OF UA/UAB/UAHuntsville/UAS  
(THE "UNIVERSITY OF ALABAMA SYSTEM")**

1. Contract #       **B001819**
  
2. Name of Contractor/Grantee \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
Phone \_\_\_\_\_
  
3. Nature of contract/grant  
      **HIGH PERFORMANCE DISTRIBUTED-MEMORY (CLUSTER) COMPUTING**  
      **SYSTEM**  
\_\_\_\_\_  
\_\_\_\_\_
  
4. Does the contractor/grantee have any relationship with an employee or official of the University, or a family member of such employee or official, that will enable such employee or official, or his/her family member, to benefit from this contract/grant? If so, please state the names, relationships, and nature of the benefit.  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

(For employees of the University, family members include spouse and dependants. For members of the Board of Trustees (officials), family members include spouse, dependants, adult children or their spouses, parents, in-laws, siblings, and their spouses.)

This disclosure form will be available for public inspection upon request.

The above information is true and accurate, to the best of my knowledge.

\_\_\_\_\_  
Signature of Authorized Agent

\_\_\_\_\_  
Date

**This form must be completed and returned before any contract(s) will be issued by the University.**