



Madan Mohan Malaviya University of Technology, Gorakhpur,

INVITATION LETTER

Package Code: TEQIP-III/2019/UP/mmug/146

Current Date: 06-Oct-2019

Package Name: MUTCF091

Method: Shopping Goods

To,

Sub: INVITATION LETTER FOR MUTCF091

Dear Sir,

1. You are invited to submit your most competitive quotation for the following goods with item wise detailed specifications given at Annexure I,

Sr. No	Item Name	Quantity	Place of Delivery	Installation Requirement (if any)
1	Rack Mount Server	2	MMMUT, Gorakhpur	NA
2	Windows server (quantity=01)	2	MMMUT, Gorakhpur	
3	SQL Software	1	MMMUT, Gorakhpur	
4	Smart Rack	1	MMMUT, Gorakhpur	NA
5	SAN Storage	1	MMMUT, Gorakhpur	NA
6	Antivirus Server Software	2	MMMUT, Gorakhpur	

2. Government of India has received a credit from the International Development Association (IDA) towards the cost of the **Technical Education Quality Improvement Programme [TEQIP]-Phase III** Project and intends to apply part of the proceeds of this credit to eligible payments under the contract for which this invitation for quotations is issued.

3. Quotation

- 3.1 The contract shall be for the full quantity as described above.
- 3.2 Corrections, if any, shall be made by crossing out, initialling, dating and re writing.
- 3.3 All duties and other levies payable by the supplier under the contract shall be included in the unit Price.

- 3.4 Applicable taxes shall be quoted separately for all items.
- 3.5 The prices quoted by the bidder shall be fixed for the duration of the contract and shall not be subject to adjustment on any account.
- 3.6 The Prices should be quoted in Indian Rupees only.
4. Each bidder shall submit only one quotation.
5. Quotation shall remain valid for a period not less than **60**days after the last date of quotation submission.
6. Evaluation of Quotations: The Purchaser will evaluate and compare the quotations determined to be Substantially responsive i.e. which
- 6.1 are properly signed; and
- 6.2 Confirm to the terms and conditions, and specifications.
7. The Quotations would be evaluated for all items together.
8. Award of contract The Purchaser will award the contract to the bidder whose quotation has been determined to be substantially responsive and who has offered the lowest evaluated quotation price.
- 8.1 Notwithstanding the above, the Purchaser reserves the right to accept or reject any quotations and to cancel the bidding process and reject all quotations at any time prior to the award of Contract.
- 8.2 *The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the quotation validity period. The terms of the accepted offer shall be Incorporated in the purchase order.*
9. Payment shall be made in Indian Rupees as follows:

Payment Description	Expected Delivery Period (in Days)	Payment Percentage
Satisfactory Delivery & Installation	30	80
Satisfactory Acceptance	30	20

10. Liquidated Damages will be applied as per the below:
 Liquidated Damages Per Day Min %: 0.01
 Liquidated Damages Max %: 10
11. All supplied items are under warranty of **12** months from the date of successful acceptance of items and AMC/Others is .
12. You are requested to provide your offer latest by **15:00** hours on **21-Oct-2019**.
13. Detailed specifications of the items are at Annexure I.
14. Training Clause (if any) Demonstration and Training of all Equipment is necessary at our site
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15.	Testing/Installation Clause (if any) Successful installation & Testing of equipment is must
16.	At least two or more similar nature of work should be executed in Education Institutes. Necessary document must be accompanied along with the bid.
17.	Bidder's annual turnover must be at least Rs. 5.0 crores during each of the last 3 Financial years.
18.	Bidder must submit the MAF from the OEM's tender specific of Server, Storage and Smart UPS Equipment for participating in the bid.
19.	The firm/company should be ISO 9001 certified (Networking & Systems Integration). A copy of the certificate must be attached, otherwise the bid will be considered as non-responsive.
20.	Bidder as well as the OEM must have presence in India from last 5 years in the same business. Proof of the same must be enclosed with the technical bid.
21.	All relevant documents must be enclosed with the tender document at the time of bid submission. Committee will not entertain any documents submitted later by the bidder at the time of Bid Evaluation.
22.	Successful bidders/ authorized dealer kindly Provide Performance security @ 10% of the goods cost (where total package cost exceed Rs. 5 lacs), valid for 1 Year
23.	Sealed quotation to be submitted/ delivered at the address mentioned below, The Registrar, M. M. M. University of Technology, Deoria Road, Gorakhpur – 273010
24.	We look forward to receiving your quotation and thank you for your interest in this project.

(Authorized Signatory)
Name & Designation

Annexure I

S.No.	Item	Description of Requirement	Compliance Yes/No
1	Chassis	2 U Rack Mountable	
2	CPU	One Latest Intel Xeon-Silver 4114 (2.2GHz/10-core/85W) FIO Processor Kit	
3	Motherboard	Intel® C621 Series Chipset	
4	Memory	24 DIMM slots. 32 GB RAM DIMMS scalable upto 1.5 TB using DDR4 Load Reduced DIMM (LRDIMM) operating at 2600 MHz (depending on processor model)	
5	Persistent memory	System should support persistent memory at over 1TB scale to deploy in-memory database	
6	Memory Protection	Advanced ECC with multi-bit error protection, Online spare, mirrored memory and fast fault tolerance	
7	HDD Bays	8 SFF Bays and scalable Up to 24+6 SFF HDD/SSD The drive carrier should have intuitive icon based display along with "DO NOT REMOVE" caution indicator that gets activated automatically in order to avoid data loss/downtime due to wrong drive removal.	
8	Hard disk drive	3x1.2 TB SAS Hot Plug HDD	
9	Controller	Server should support Onboard SATA software RAID controller supporting SSD/HDD and at least two M.2 drives PCIe 3.0 based 12Gb/s SAS Raid Controller with RAID 0/1/1+0/5/50/6/60/1 Advanced Data Mirroring/10 Advanced Data Mirroring with 4GB battery backed write cache (on board or on a PCI Express slot) Storage controller should support Secure encryption/data at rest Encryption	
10	Networking features and Storage Connectivity	<ol style="list-style-type: none"> 1. 1Gb 4-port network adaptors 2. Dual Port FC Card compatible to connect external Storage 	
11	Interfaces	Serial - 1 Micro SD slot - 1 USB 3.0 support With Up to 5 total: 1 front, 2 rear, 2 internal (secure)	
12	Bus Slots	Six PCI-Express 3.0 slots, atleast two x16 PCIe slots	
13	Power Supply	Should support hot plug redundant low halogen power supplies with minimum 94% efficiency	
14	Fans	Redundant hot-plug system fans	
15	Operating System	MS Windows Sever Standard Edition latest edition with 5 CAL as mentioned in SOR	

16	Industry Standard Compliance	ACPI 6.1 Compliant PCIe 3.0 Compliant PXE Support WOL Support Microsoft® Logo certifications USB 3.0 Support USB 2.0 Support Energy Star ASHRAE A3/A4 UEFI (Unified Extensible Firmware Interface Forum)	
17	System Security	UEFI Secure Boot and Secure Start support Security feature to ensure servers do not execute compromised firmware code FIPS 140-2 validation Common Criteria certification Configurable for PCI DSS compliance Advanced Encryption Standard (AES) and Triple Data Encryption Standard (3DES) on browser Support for Commercial National Security Algorithms (CNSA) mode to prevent the use of insecure algorithms Tamper-free updates - components digitally signed and verified Secure Recovery - recover critical firmware to known good state on detection of compromised firmware Ability to rollback firmware Secure erase of NAND/User data TPM (Trusted Platform Module) 1.2 option TPM (Trusted Platform Module) 2.0 option Bezel Locking Kit option Chassis Intrusion detection option	
18	Operating Systems and Virtualization Software Support	Microsoft Windows Server Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) VMware ClearOS	
19	GPU support	System should support NVIDIA's latest computational accelerators and graphics accelerators	
20	System tuning for performance	1. System should support feature for improved workload throughput for applications sensitive to frequency fluctuations. This feature should allow processor operations in turbo mode without the frequency fluctuations associated with running in turbo mode 2. System should support workload Profiles for simple performance optimization	
21	Secure encryption	System should support Encryption of the data (Data at rest) on both the internal storage and cache module of the array controllers using encryption keys. Should support local key management for single server and remote key management for central management for enterprise-wide data encryption deployment.	
22	Warranty	Server Warranty includes 3-Year Parts, 3-Year Labour, 3-Year Onsite support with next business day response.	

23	Provisioning	<p>1. Should support tool to provision server using RESTful API to discover and deploy servers at scale</p> <p>2, Provision one to many servers using own scripts to discover and deploy with Scripting Tool (STK) for Windows and Linux or Scripting Tools for Windows PowerShell</p>	
24	Firmware security	<p>1. For firmware security, system should support remote management chip creating a fingerprint in the silicon, preventing servers from booting up unless the firmware matches the fingerprint. This feature should be immutable</p> <p>2. Should maintain repository for firmware and drivers recipes to aid rollback or patching of compromised firmware. Should also store Factory Recovery recipe preloaded to rollback to factory tested secured firmware</p>	
25	Embedded Remote Management and firmware security	<p>1. System remote management should support browser based graphical remote console along with Virtual Power button, remote boot using USB/CD/DVD Drive. It should be capable of offering upgrade of software and patches from a remote client using Media/image/folder; It should support server power capping and historical reporting and should have support for multifactor authentication</p> <p>2. Server should have dedicated 1Gbps remote management port</p> <p>3. Remote management port should have storage space earmarked to be used as a repository for firmware, drivers and software components. The components can be organized in to install sets and can be used to rollback/patch faulty firmware</p> <p>3. Server should support agentless management using the out-of-band remote management port</p> <p>4. The server should support monitoring and recording changes in the server hardware and system configuration. It assists in diagnosing problems and delivering rapid resolution when system failures occur</p> <p>5. Applications to access the server remotely using popular handheld devices based on Android or Apple IOS should be available</p> <p>6. Remote console sharing upto 6 users simultaneously during pre-OS and OS runtime operation, Console replay - Console Replay captures and stores for replay the console video during a server's last major fault or boot sequence. Microsoft Terminal Services Integration, 128 bit SSL encryption and Secure Shell Version 2 support. Should provide support for AES and 3DES on browser. Should provide remote firmware update functionality. Should provide support for Java free graphical remote console.</p> <p>7. Should support managing multiple servers as one via</p> <ul style="list-style-type: none"> Group Power Control Group Power Capping Group Firmware Update Group Configuration Group Virtual Media Group License Activation 	

		8. Should support RESTful API integration 9. System should support embedded remote support to transmit hardware events directly to OEM or an authorized partner for automated phone home support	
Server Management		Software should support dashboard view to quickly scan the managed resources to assess the overall health of the data center. It should provide an at-a-glance visual health summary of the resources user is authorized to view.	
		The Dashboard minimum should display a health summary of the following: • Server Profiles • Server Hardware • Appliance alerts	
		The Systems Management software should provide Role-based access control	
		Management software should support integration with popular virtualization platform management software like vCenter, and SCVMM	
		Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD.	
		Should provide an online portal that can be accessible from anywhere. The portal should provide one stop, online access to the product, support information and provide information to track warranties, support contracts and status. The Portal should also provide a personalised dashboard to monitor device health, hardware events, contract and warranty status. Should provide a visual status of individual devices and device groups. The Portal should be available on premise (at our location - console based) or off premise (in the cloud).	
		Should help to proactively identify out-of-date BIOS, drivers, and Server Management agents and enable the remote update of system software/firmware components.	
		The Server Management Software should be of the same brand as of the server supplier.	

Detailed Technical Specifications of SMART Rack

S.NO	Specifications	Compliance Yes/No
	Usable "U" Space (Approx.)	31
	Racks	1 no's - 42 U (800mm*1000mm)
	UPS	2*3KVA
	Battery External (42AH-6 block with Each UPS, total 12 blocks)	Yes
	Cooling capacity	3.5KW*1
	RDU	Yes
	Email Notification	Yes

	RDU	Yes	
	Temp./ humidity Monitoring	Yes	
	Water leak detection	Yes	
	Alarm	Yes	
	Smoke detection	Yes	
	Biometric Access Control	Yes	
	Standard Rack PDU -12 IEC C13 & 4- IEC C16 (2 PDU per Rack)	Yes	
	Live Camera Surveillance (Without Recording)	Yes	
	Emergency Door Opening in case of cooling failure	Yes	
	Rodent repellent	yes	
	Blanking Panel - 100%	Yes	

Detailed Technical Specifications of Storage

S. No	Parameter	Functionality	Compliance Yes/No
1.0.1	Operating System & Clustering Support	<p>1. The storage array should support industry-leading Operating System platforms including: <i>Windows 2012 / 2016, HPE-UX, VMware and Linux.</i></p> <p>2. Offered Storage Shall support all above operating systems in Clustering.</p>	
1.0.2	Capacity & Scalability	<p>1. The Storage Array shall be offered with 12 x 1.2TB SAS 12G 10k RPM 2.5" drives.</p> <p>2. For effective power saving, Storage subsystem shall be supplied with 2.5" Small form factor SFF drives however storage subsystem shall also support LFF drives with the addition of required disk enclosures.</p> <p>3. Storage shall be scalable to minimum of 190 number of SAS SFF drives.</p>	

1.0.3	Front-end Ports	<p>1. Offered Storage system shall be supplied with minimum of 4 x 16Gbps FC ports along with Cables of 5 Meters</p> <p>2. Offered storage shall have flexibility to use all above ports either as FC or ISCSI by replacing the requisite SFP. Vendors shall provide the additional SFP accordingly. In case, vendor doesn't support this feature, then every controller shall be populated upfront with 4 x 16Gbps FC ports and 4 x 10Gbps ISCSI ports.</p>	
1.0.4	Architecture	The storage array should support dual, redundant, hot-pluggable, active-active array controllers for high performance and reliability	
1.0.5	No Single point of Failure	Offered Storage Array shall be configurable in a No Single Point of configuration including Array Controller card, Cache memory, FAN, Power supply etc.	
1.0.6	Disk Drive Support	<p>1. Storage system shall also support maximum of 1.8TB Enterprise SAS Drives, 3.2TB SSD and 12TB near line SAS drives.</p> <p>2. Offered storage array shall also have support for self-encrypted SAS and near line SAS drives.</p>	
1.0.7	Cache	<p>1. Offered Storage Array shall be given with Minimum of 8GB cache per controller in a single unit.</p> <p>2. Cache shall be backed up in case of power failure for indefinite time either using batteries or capacitors or any other equivalent technology.</p> <p>3. Offered Storage shall also have optional support for Flash cache using SSD / Flash drives. Offered storage shall support at-least 8TB Flash Cache. Vendor shall offer atleast 6TB Flash cache.</p> <p>4. Offered Flash cache shall be tuned for random read operations and shall remain activated even at less than 70% of random average read workload.</p>	

1.0.8	Raid Support	<p>1. Offered Storage Subsystem shall support Raid 0, 1, 1+0, 5 and Raid 6</p> <p>2. All Raid Sets shall support thin provisioning. Vendor shall offer the license of thin provisioning for complete supported capacity of the array.</p> <p>3. Thin provisioning shall be supported with offered Flash Cache.</p>	
1.0.9	Point in time and clone copy	<p>1. Offered Storage array shall be configured with array based Snapshot and clone functionality and shall be configured for minimum of 512 snapshot licenses.</p> <p>2. Offered Storage array shall support at-least 512 point in time copies (Snapshots) and 128 Clone copies</p>	
1.1.0	Replication	<p>1. Offered storage subsystem shall support storage based replication to DR location. License for maximum supported capacity of the array shall be offered.</p> <p>2. Offered storage subsystem shall support replication to multiple storage array of the same family in fan-out mode. At least 1:4 mode shall be supported.</p>	
1.1.1	Virtualization and Thin provisioning	<p>1. Offered storage shall be offered and configured with virtualization capability so that a given volume can be striped across all spindles of given drive type within a given disk pool. Disk pool shall support all listed raid sets of Raid 1, Raid 5 and Raid 6.</p> <p>2. Offered Storage shall be offered and configured with Thin Provisioning capability.</p>	
1.1.2	Data Tiering	<p>Offered Storage shall also be configured for Sub-Lun Data tiering in real time fashion across different type of drives within a given pool like SSD, SAS, NL-SAS etc. License shall be configured for maximum supported capacity of the array.</p>	
1.1.3	Global and dedicated Hot Spare	<p>1. Offered Storage Array shall support Global hot Spare for offered Disk drives.</p> <p>2. Atleast 2 Global hot spare drive shall be configured for every 30 drives.</p> <p>3. Storage subsystem shall also have the flexibility to assign dedicated spare for raid sets.</p>	

1.1.4	Logical Volume & Performance	<p>1. Storage Subsystem shall support minimum of 512 Logical Units. Storage Array shall also support creation of more than 100TB volume at controller level.</p> <p>2. Offered Storage shall have inbuilt performance management software. Configuration Dashboard shall show overall IOPS and MB/sec performance.</p>	
1.1.5	Load Balancing & Muti-path	<p>1. Multi-path and load balancing software shall be provided, if vendor does not support MPIO functionality of Operating system.</p>	
1.1.6	Warranty	3 Years	

FORMAT FOR QUOTATION SUBMISSION
(In letterhead of the supplier with seal)

Date: _____

To: _____

Sl. No.	Description of goods \ (with full Specifications)	Qty.	Unit	Quoted Unit rate in Rs. (Including Ex-Factory price, excise duty, packing and forwarding, transportation, insurance, other local costs incidental to delivery and warranty/ guaranty commitments)	Total Price (A)	Sales tax and other taxes payable	
						In %	In figures (B)
Total Cost							

Gross Total Cost (A+B): Rs. _____

We agree to supply the above goods in accordance with the technical specifications for a total contract price of Rs. _____ (Amount in figures) (Rupees _____ amount in words) within the period specified in the Invitation for Quotations.

We confirm that the normal commercial warranty/ guarantee of _____ months shall apply to the offered items and we also confirm to agree with terms and conditions as mentioned in the Invitation Letter.

We hereby certify that we have taken steps to ensure that no person acting for us or on our behalf will engage in bribery.

Signature of Supplier

Name: _____

Address: _____

Contact No. _____