राष्ट्रीय पादप जीनोम अनुसंधान संस्थान

(जैव प्रौद्योगिकी विभाग, विज्ञान एवं प्रौद्योगिकी मंत्रालय, भारत सरकार का स्वायत्त अनुसंधान संस्थान)

NATIONAL INSTITUTE OF PLANT GENOME RESEARCH

(An Autonomous Institution of the Department of Biotechnology, Ministry of Science and Technology, Government of India)

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No. 8-6/2019-20/NIPGR/S&P   Dated 13/06/2019

Corrigendum

This has reference to our tender No 8-6/2019-20/NIPGR/S&P dated 27/5/2019 and CPP No. 2019_NIPGR_472204_1 regarding supply and installation of a High-Performance Computing Cluster (HPCC) at our Institute.

1) In this context, this is to mention that the **technical specifications have been revised** and the same are attached at **Annexure- I**.

2) Date of submission/opening of Tenders:

   27/6/2019 & 28/6/2019 (3.00 P.M respectively)

   Vice

   Date of submission/opening of Tenders:

   17/6/2019 & 18/6/2019 (3.00 P.M respectively)

The above changes may please be noted while uploading the tenders. This Corrigendum will form part of the Original Tender Document. All other terms and conditions of the tender remain unchanged.

Purchase cum Stores Officer

Revised Technical Specifications for High performance computing multi-socket cluster with SAN storage. (Tender No. 8-6/2019-20/NIPGR/S&P)

High performance computing multi-socket cluster:

Feature	Minimum Specifications
Form Factor	5U or Less
Server Type	Rack server, Mountable to existing 19" Rack
Server Make	OEM Make of national and international reputation
Processor Sockets	Maximum up to 8 sockets of Scalable Family processors
CPU	4 x Intel Xeon Platinum 8170 processor, 26 Core/52 threads or higher with minimum 165 W, Base frequency 2.1GHz/Turbo 3.7 GHz or more with 35.75 MB L3 cache
Chipset	Intel C624 or higher version of Intel chipset
Memory Capacity	2TB or more RAM using 64GB DDR4 DIMM - Scalability up to 6TB or more for 4 processors and 12 TB or more for 8 processors server models. Should also support memory mirroring, and memory rank sparing for redundancy in the event of a non-correctable memory failure
HDDs Bays	Minimum 12 HDDs hot-swap 2.5 inch SAS/SATA/SSD drive bays expandable to 24 bays using additional cage. At least 2 bays must support PCIe NVMe drives.
No. of HDDs	09 x 2.5 inch 2.4TB 10K SAS 12Gb Hot Swap 512e HDD and 03x1.92TB Hot swap SSD 2.5 DWPD or above
PCI-E slots	Minimum 6 PCIe 3.0 expandable to 15 PCIe 3.0 slots,
RAID Card	12 Gb SAS RAID adaptor with 4GB flash-backed cache, All software and utility license must be bundled for supporting RAID 5 and above
FC HBA	1 x Emulex 16Gb Gen6 FC Dual-port HBA
Ethernet and other ports	4-port 1Gb RJ45 Dedicated 1Gb System management port At least 4 USB ports 1 VGA Port for connecting external monitor
Power supplies	Hot-swap & Redundant power supplies (80 PLUS Platinum certified) required

Fans	Hot-swap & N +1 Redundant Fans required
Systems Management HW &TPM	HW required for remote presence enablement with TPM 2.0 is required.
Systems Management SW	Vendor to provide software for managing all the servers. S/W should provide a single view to monitor health of the components of all the servers in the network. Software should be able to manage other x86 servers. Software should manage the Patch updates, Monitor Power for servers, Monitor health and resource utilization. The server must include licensed software to monitor server availability and perform remote management. remote KVM and remote media files (ISO and IMG image files), boot capture, and power capping. The server management software should be of the same brand as of the server supplier.
Diagnostics	LED lights indicate failing component required for CPU, memory, HDDs, power supplies & fans to send pre-failure alerts to the administrator. They should be persistent without power.
Limited Warranty	Comprehensive 3 years OEM 24x7 ONSITE warranty for hardwares
Rail kits	Must include Rail kits for mounting the server
OS Certifications	Server should be certified on latest version of Microsoft Windows, RHEL, SLES, Vmware, Linux

SAN Storage:

Feature	Storage
Storage Controller	The offered storage shall have a dual controller configuration running in an active-active mode with automatic failover capabilities, offered storage should be of the same make as the server OEM
Controller Cache Requirements	The offered storage shall have 8GB cache per controller with ability to protect data on cache. Cache should be mirrored and Battery-free cache protection with flash memory and supercapacitors
RAID	The offered storage shall have RAID 5 or above
Host Interface Ports	The offered storage shall be provided with 4 x FC 16Gb ports across the controllers along with cables to connect to hosts
Capacity	100 TB useable capacity using 8TB 7.2K 3.5" NL-SAS dual-port and hot-swappable HDD drives configured in RAID 5 with 1 additional global hot-spare.

	Additional enclosures may be provided for the above capacity. The storage system should also support the following Per system: • Minimum pool size: 500 TB • Minimum number of logical volumes: 500 • Minimum number of drives in a RAID drive group: 12 • Minimum global spares: 2 • Minimum number of hosts in a host group: 25 • Backend connectivity for connecting enclosures must be at least 12Gb SAS
Storage Features and capabilities	Must be licensed the following features for entire supported capacity • Real time tiering of HDD between SAS and NL-SAS disks or SSD caching • Thin provisioning • 100 or more snapshot per system
Storage Scalability	The offered storage shall be scalable to 192 or more with similar LFF drives or more using additional enclosure.
Management	The offered storage shall have easy to use GUI based and web enabled administration interface for configuration, storage management using dedicated 1 Gb Ethernet Port
Built in Redundancy	The offered storage shall support fully redundant & hot-swappable fans & power supplies. There shall be support for non-disruptive microcode update & non-disruptive parts replacement. The storage must be bundled with automated path failover for the data path between the host and the drives with multipathing software for the entire supported capacity.
Power Supplies	The storage systems must be configured with redundant power supplies.
Form Factor	2U rack-mount with rail-kit and other required accessories Main unit. Mountable in 19" existing rack.
OS Compatibility	Must support Hosts with the latest version of Microsoft Windows, RHEL,SLES,Vmware
Warranty	Comprehensive 3 years OEM 24x7 ONSITE warranty for hardwares

Services – Scope of work

1. Install the hardware in existing 19" rack
2. install open source Linux OS on Server
3. Configure the storage and capacities and provisions the LAN to the server as per NIPGR staff guidance.

4. Configure the Management layer and demonstrate at least 2 persons about how to use the functions and feature available.
5. Configure and compile as per CANU/FALCON and other Bioinformatics tools.
6. Install and configure necessary opensource compiler tools
7. Configure the management accessibility to OEM support center for pre-failure alerts.

Mandatory Clause	Compliance Yes/No	Remarks
All parts of server and storage to be supplied by Single Original Equipment Manufacturer (OEM). The system offered should maintain Binary compatibility across the entire range. Bids must contain OEM Part No. will be checked with the OEM after supply & if necessary a certificate has to be furnished on OEM letter head. All hardware warranty and support should be directly from the OEM.		
Both the equipment must be of regular model numbers of OEM's brochure. Specifications quoted should match with the specifications of the models mentioned in the brochure. Brochures of the quoted models of the items have to be submitted along with the bid.		
The entire server, storage and compute nodes must be factory integrated, tested, validated and certified in the OEM site. No on-site or local assembling of the system at NIPGR site is allowed. Only rack-mounting, OS and application installation is allowed on-site. Barebone/ assembled servers and solutions are not allowed.		
Bidder should be either an OEM or should be authorized System Integrator. Manufacturer's Authorization Form (MAF) for participating in this tender is mandatory for bidders and should be attached along with technical bid. The bidders participating in the tender process should give the MAF the bidder's authorization to participate in the tender with tender number and details.		
All the hardware and software deployment will be in OEMs/bidder scope of work and OEM/bidder need to install open source software required by the end user at the time of deployment.		
Comprehensive 3 years OEM 24x7 ONSITE warranty for hardware. The complete proposed solution must have all encompassing comprehensive onsite replacement warranty of 3 years duration which includes hardware, firmware and updates, etc.		
Bidder must have back to back warranty and support directly from the OEM. NIPGR requires that there be a Single Point of Contact (SPOC) from OEM/bidder who is responsible for all issues between NIPGR and the OEM/Bidder.		
The bidder should have a local service center/authorized service provider in NCR. OEM should have a registered office with service center and warehouse in India. Documentary proofs should be enclosed.		

The OEM must have an India-based support infrastructure by maintaining a local spares warehouse in the country. This is to ensure immediate delivery of spare parts from OEM to its channel /system integrator.		
Products offered should have official OEM support for next five years from the date of acceptance of installation.		

Other Criteria required for the bids:

Technical pre-qualification criteria	Compliance Yes/No	Remarks
The OEM/Subsidiary should have the minimum experience in server computing in Indian Market since last 5 years with logistics facility in India for easy access and availability of spares and to ensure the proper back-end support for smooth execution and post-sale support operations. Documentary proofs should be attached.		
All quotations submitted must follow the prescribed format for technical compliance. A compliance sheet for technical specifications and other clauses should be submitted with the bid. Failure to do will result in the quotation being summarily rejected.		
One bidder can propose only one technical solution and the price bid for the same should be submitted. Quoting of multiple technical solutions with multiple price bids will result in the quotation being summarily rejected.		
Compliance: ROHS/WEEE/ CSAc/us, FCC Class A, CE, CB		