GLOBAL TENDER NOTICE

Corrigendum 2 to NIT No. GBPIC/8.2.4.1/2017-18/3486 DATED 28th Feb, 2018
For extension of Tender Submission Date and Change in Technical specification

The last date for submission of bid for Tender notice no. **NIT No. GBPIC/8.2.4.1/2017-18/3486 DATED 28th Feb, 2018** for supply and installation of software, hardware and accessories for Bioinformatics facility is hereby extended up to 10.04.2018(Tuesday) till 17.00 hrs. The bids will be opened on 11.04.2018 (Wednesday) at 11.00 AM at GBP office. All other terms and conditions of the tender will remain the same. Those who have already sent their bids as per earlier technical specifications can send their revised bids in the light of the correct technical specifications as mentioned below. The bidders are advised to take into account the amendments before submission of their bids against this tender. This corrigendum will form integral part of tender and will be submitted duly signed and stamped along with bids.

For details, please visit our website **www.guwahatibiotechpark.com/business/tenders**. Authority of Guwahati Biotech Park reserves the right to reject any or all the bids or accept them in part without assigning reason(s) thereof. Further clarification/corrigendum in this regard, if any, will be uploaded only on GBP website.

Sd/-

(Shri Vinod Seshan, IAS)

Chief Executive Officer

Corrigendum 2 to NIT No. GBPIC/8.2.4.1/2017-18/3486 DATED 28th Feb, 2018
For extension of Tender Submission Date and Change in Technical specification

The technical specifications for the Bioinformatics facility stand modified as enumerated below. The changes have been made after considering the technical points put forth in letters/ emails by the various companies. The changes are intended to enable maximal participation from eligible vendors while not compromising on the major applications required by the institute.

ANNEXURE-XII

TECHNICAL SPECIFICATION

1. MASTER NODE - Qty. 1 no.

Item	Description
Processors	20 Cores = Intel Xeon Gold 4114 2.2G, 10C/13.75M Cache, Turbo, HT (125W) DDR4 @ 2666 Mhz
Chipset	Latest OEM chipset supporting an optimized for the above processor
Memory	512 GB upgradable to 3 TB
Hard Disk Drives	4 x 1.2TB 10K RPM SAS 12Gbps 512n 2.5in Hot plug Hard Drive
HDD bays	HDD bays supporting SAS, SATA, SSD Drives
Optical Drive	Internal/External DVD-ROM drive
I/O slots	Up to 6 x PCIe 3.0 slots and 1 x FlexLOM slots
RAID levels	Integrated RAID Controller, 1GB Cache, Support for RAID 0,1 ; support for RAID 5
Network Interface	2x On-Board LOM 1GBE (Dual Port for Towers, Quad Port for Racks) 2 x 10G Ethernet Interface Card, 16Gbps dual port HBA for FC
Graphics controller	Integrated Graphics with at least 16 MB Video Memory
Server Mgmt.	OEM embedded controller and Server Management Tool from same OEM
Ports	Min 3 USB ports or higher
Power supplies	Redundant Platinum rated efficient Power Supply to sustain above configuration. Platinum Power Supply.
Cooling	Hot plug and redundant fans
Industry standard Support	User-selectable power cap (subsystems throttle to maintain the specified power cap), ACPI 3.0 Compliant, PCI 2.3 compliant, PXE and WOL Support, IPv4 and IPv6 support
Industry standard certifications	The quoted server models should have the following Certifications:
	Microsoft Windows Server 2008 R2, Microsoft® Windows® HPC Server 2008, Novell SUSE
	Linux Enterprise Server, Red Hat Enterprise Linux, Sun Solaris, Microsoft®
	Windows Server® 2008 Hyper-V, VMware® ESXi Version 4.1 , Citrix® XenServer 5, FCC, UL, ROHS

	The server OEM must be ISO-14001
Form factor	Max. 2U Rack form factor with sliding rails to fir into industry standard 19" Server Rack
Warranty	5 years onsite warranty by OEM
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 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

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

Firmware security	1. The system should have support for encrypted firmware up gradation through silicon root of trust to prevent servers from booting up unless the firmware matches the fingerprint. 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

2. Compute NODE - Qty. 5 no.	
Item	**Description**
Processors	20 Cores = Intel Xeon Gold 4114 2.2G, 10C/13.75M Cache, Turbo, HT (125W) DDR4 @ 2666 Mhz
Chipset	Latest OEM chipset supporting an optimized for the above processor
Memory	512 GB upgradable to 3 TB
Hard Disk Drives	2 x 1.2TB 10K RPM SAS 12Gbps 512n 2.5in Hot plug Hard Drive

HDD bays	HDD bays supporting SAS, SATA, SSD Drives
Optical Drive	Internal/External DVD-ROM drive
I/O slots	Up to 6x PCIe 3.0 slots and 1 x Flex LOM Slots
RAID levels	Integrated RAID Controller, 1GB Cache, Support for RAID 0,1 ; support for RAID 5
Network Interface	2x On-Board LOM 1GBE (Dual Port for Towers, Quad Port for Racks) 2 x 10G Ethernet Interface Card, 16Gbps dual port HBA for FC
Graphics controller	Integrated Graphics with at least 16MB Video Memory
Server Mgmt.	OEM embedded controller and Server Management Tool from same OEM
Ports	Min 3 USB ports
Power supplies	Redundant Platinum rated efficient Power Supply to sustain above configuration. Platinum Power Supply
Cooling	Hot plug and redundant fans
Industry standard Support	User-selectable power cap (subsystems throttle to maintain the specified power cap), ACPI 3.0 Compliant, PCI 2.3 compliant, PXE and WOL Support, IPv4 and IPv6 support
Industry standard certifications	The quoted server models should have the following Certifications:
	Microsoft Windows Server 2008 R2, Microsoft® Windows® HPC Server 2008, Novell SUSE
	Linux Enterprise Server, Red Hat Enterprise Linux, Sun Solaris, Microsoft®
	Windows Server® 2008 Hyper-V, VMware® ESXi Version 4.1 , Citrix® XenServer 5, FCC, UL, ROHS
	The server OEM must be ISO-14001
Form factor	Max. 2U Rack form factor with sliding rails to fir into industry standard 19" Server Rack
Warranty	5 years onsite warranty by OEM
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 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

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
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Item : Storage	
Item	**SAN Storage for Primary site**
Controller	Dual active controller with automated I/O path failover
Connecting ports(SAN)	Should have minimum of 4x16GBps FC and 4X10 GBPs iSCSI ports
Management Software	Must include Storage Manager software, to centrally manage all Storage subsystems, Multi-path (Load Balancing & Failover), LUN masking, it should Support RAID migration on to the vacant space available.
O/S Support	Support for multiple Operating Systems connecting to it, including of Windows, UNIX, Linux, AIX, HP UX etc. OEMS own storage OS should come preloaded.
Scalability	It Should be scalable to minimum 180 No. of HDD. Storage should come up with 12 bays 3.5 inch Hard Drive enclosure
Capacity	120 TB RAW (12 x 10 TB NLS SAS/SATA)
Software feature	Snapshot, volume copy, synchronous and asynchronous mirroring, replication software, SSD cache, Thin Provisioning should be provided.
System capabilities	Data Assurance (T10-PI) or better, volume expansion, Capacity expansion
	RAID-level migration, Dynamic segment size migration, System event monitor
Raid Controllers	Dual, Active, minimum 32 GB cache or higher across dual Controllers
Protocol Support	FCP,iSCSI
Cache Safety	Cache should be mirrored and battery-backed-up /disk-destaged, to provide protection of data for 72 hours or more.
Drive Interface	12 GBPs SAS

Supported Drives, Mixed Drives	Should support SSD, SAS, NL-SAS, 12 GBPs Drives in same enclosure.
RAID levels	RAID levels 0, 1, 5, 6 and 10 or better
Fans and power Supplies	Redundant, hot-swappable power supplies and fans
Rack Support	Suitable for industry-standard Racks and PDUs
Data Services	Should include data Snapshot, Thin provisioning, Volume cloning or equivalent features for the offered capacity of the storage array.
Alerts	Automated alerts for Improving service response times.
Warranty	5 Years
Software	
Operating System	Commercial Industry standard Cluster Suit with support

Item : SAN 10 Gigabit Switch	
Item	**Specification**
SAN Switch	16x 16Gbps-Active ports, 16X10m LC-LC OM4 cables should be provided
Warranty 5 Years	
Item	Specification
10 Gigabit Switch	12X10 Gbps SFP+ populated or higher port Switches
KVM Switch	8 ports KVM Switch, 5 years of warranty

Item : Workstation : Qty 1	
Processor	2 x Intel Xeon E5-2620v4 2.1 2133 8C 1stCPU
Chipset	Latest OEM Chipset
RAM	64GB DDR4-2400 (4x16GB) Reg RAM:Total 8 DIMM Slots (4 DIMM (with 1 processor) and 8 DIMM (with 2 processors)upgraded Up to 256 GB DDR4-2400 ECC registered SDRAM DDR4-2133 ECC Registered RAM
Drive Controllers	Onboard 6-Channel SATA @ 6Gbps (RAID0,1,5,10)
Hard Disk	2TB 7200 RPM SATA 1st Hard Drive Option for future expansion of additional 4 Hard drives.
Optical Drive	DVD Writer
Graphics Card	NVIDIA Quadro K2200 4GB DL-DVI(I)+2xDP 1st No cables included Graphics
Monitor	21.5 inch FHD (3 years warranty)

Item : 42U Rack	Specifications
42U Rack	42U standard OEM racks to be supplied. The rack should be supplied with perforated front and back doors. The rack unit should be of size 600W X 1000D or higher. Suitable capacity of redundant PDU's circuit breakers for single phase or 3 phase UPS power inlets should be provided. There should be proper design, with self cooling (Fans). Mechanism for the Master/ Compute/ Computational nodes in the rack. Horizontal and vertical cable management should be provided. 5 years comprehensive warranty.

Item : 10 KVA Online UPS with 120 Minutes	
Parameter	**Required Specifications**
Configuration	10 KVA On-Line UPS System with Inbuilt Isolation Transformer. UPS Should have inbuilt battery cold start function
Capacity & Output Power Factor	**10 KVA & 0.8**
Input Voltage Range	285-470 VAC @ 100% LOAD THREE PHASE (4 WIRE)
Input Frequency	50Hz ± 10% (Suitable for Generators)
Output Voltage	220/230/240 ±1%
Output Frequency	50 Hz ±0.1%
Overload Capacity	125% for 1 minutes, 150% for 1 seconds
Noise (Db)	**<65 DB , (1 METER)**
Efficiency	Upto 90%
Harmonic Distortion	Less than 3%
Isolation Transformer	UPS output should be inbuilt isolation transformer within the UPS cabinet itself. External transformer shall not be considered.
Ambient Conditions	Temp: 0–40 Deg C
Relative Humidity: 95% Max. non-condensing	
Audible Alarms	Battery low voltage , abnormal power supply , ups failure , over load
Digital Display	Digital display for measurement input & out voltage , input & out frequency , load capacity, battery voltage
Battery Back-up & Other Details	The system must be capable of providing requisite battery back-up time of 120 minutes sing Sealed Maintenance Free Batteries along with Rack & Links.
	Required VAH : 19,200 VAH minimum
Certification	The UPS OEM should be ISO 9001, ISO 14001, OHSAS 18001 certified
	The offered UPS model should have **RoHS Compliance**
	Copies of the above certifications should be submitted with the technical Bid (compulsory)
After Sales Support & Manufacturer's Credibility	UPS OEM should have previous experience of supplying similar UPS and value to any End User.
UPS OEM should have a dedicated Toll Free No. for service call logging & resolution and All India Service Centre	
Required 5 years warranty onsite.	

Desktop: Qty 4	
Form Factor	**Micro Tower**
OS	Wind 10 Pro 64 Bit , Linux®64 Windows7 Professional 32 bits & 64 Bits
Processor	7th Generation - Intel Core i7 7700K (3.6 GHz base frequency upto 4.5 GHz Max. Turbo Frequency)8 MB cache, 4 cores
Chipset	Latest OEMs
Memory	16GB (1x16GB) DDR4 2400 Memory upgradable up to 64 GB.

Memory Slots	4 DIMMS
Internal Storage	2 TB 7200RPM
OpticalDrive	DVD-Writer
Graphics	NVIDIA GeForce GT730 2GB PCIe x8 DP GFX
Expansion Sots	2 full-heightPCIex1;2full-heightPCIex16,onewiredasx4
Ports and connectors	Front:1audioout;2USB2.0;1USBType-;2USB3.1Gen1;1headsetconnector2
Back:1RJ-45 USB2.0;1audioin;1audioout;4USB3.1Gen1;1choiceof DisplayPort™;2 DisplayPort out; 1DisplayPort™1.221, 1HDMI/1VGA	
Communication	10/100/1000 Gigabit Network Connection
Drive bays	One slim ODD; One3.5"HDD; One5.25"or two2.5"HDD
Power Supply	180 w/250W,active PFC
Warranty	5 years warranty (material/labour/onsite)
Monitor	21.5 inch, IPS w/ LED backlight, 3 years warranty

SL NO	Eligibility of the Bidders
1.	This invitation for bids is open to all reputed original equipment manufacturers (OEM) or authorized partner of the OEM to quote on their behalf for this tender.
2.	The Bidder should not have been blacklisted in any Government/ Government undertaking/Public sector companies. A self-declaration letter by the bidder, on the company's letterhead should be submitted along with technical bid.
3.	Vendor has to enclose manufacturer authorization certificate mentioning the Tender No. to quote for this particular tender.
4.	The bidder should participate as a single party and no consortium is allowed.
5.	The bidder should have an experience of maintaining of servers, storage. Documentary evidence is required to submit.
6.	Bidder should have support services in Guwahati (proof of office like Municipal certificate/Trade License etc.)
7.	The Server OEM should fall under Top manufacturers in the Leaders Quadrant of Gartner's magic quadrant (latest edition) for Global Enterprise X86 platform servers.

Note:

- **The equipment should be provided with all necessary accessories and spare**
- **Kindly quote break up cost for each item**
- **Spares and accessories should be quoted separately**
- **Normally quantity in orders shall be as per Checklist/BOQ mentioned in the Annexure-XII**
- **However GBP reserves the right to vary the quantity at the time of placing the orders without changing the unit rates & other terms.**