



MAHATMA GANDHI UNIVERSITY

KOTTAYAM

No. SBS/ETENDER/BIO INFORMATICS/ 2018

Date: 30.06.18

NOTICE INVITING TENDER

(Tender No: SBS/ETENDER/BIO INFORMATICS/ 2018)

The Registrar, Mahatma Gandhi University, Kottayam invites online bid (technical and financial bid) from reputed firms for Supply and installation of hardware items for **Bioinformatics facility at School of Biosciences** of the University.

1	Name of the equipment	<u>Bioinformatics facility</u>
2	Earnest money deposit (EMD)	83780+GST
3	Tender submission fee	Rs.12600 +GST <u>Rule as per SPM</u> [Above `10.00 lakh :- 0.15% of the cost of tender rounded to the nearest multiple of 100, subject to a maximum of ` 25000/- + VAT as applicable, 50% of the cost of the original copy, upper rounded to the nearest multiple of 100 + VAT as applicable]
4	Period of supply and installation	Within 10 days from the L/C opening date
5	Mode of submission of Bid	Online
6	Tender Documents	Can be downloaded from the website www.etenders.kerala.gov.in
7	Last date and Time of submission of tender by online	18.07.18 2 pm
8	Last date and Time of submission of relevant documents by speed post	19.07.18 4pm
9	Date and time of opening of bid opening	20.07.18 2 pm

General tender documents and tender schedule can be downloaded in A₄ plain size paper free of cost from the website www.etenders.kerala.gov.in. **Duly filled up and signed tender schedule along with relevant documents should also be sent to The Registrar, M.G. University, Kottayam, Kerala Pin-686560**, by speed post so as to reach before the date and time specified. The cover containing the documents should super scribe the name of the tender, number, and last date of submission of tender. Documents to be submitted along with bid through online/speed post.

Sl.No	Through online	Through speed post
1	Scanned copy of valid dealership certificate.	Copy of valid dealership certificate
2	Scanned copy of duly filled e-payment form	Duly filled e-payment requisition.
3	Scanned copy of other certificates required, if any, for tender acceptance	Copy of other certificates required, if any, for tender acceptance.
4	Scanned copy of valid registration certificate.	Copy of valid registration certificate
5	Scanned Copy of duly filled preliminary Agreement in stamp paper of Rs.200/-	Preliminary Agreement in original
6	BOQ	Not Required

Special Conditions

1. The quoted Price should be inclusive of all taxes/freight/Installation etc.
Customs / Excise Duty Exempted price should also be quoted
2. Scanned copy of brochure of different models quoted should be enclosed
3. **Warranty, AMC conditions**, nearest servicing centers details, user reference and supporting catalogues should be provided (hard and soft copies).
4. If the product has a Valid DGS & D rate contract , it may be quoted
5. The Delivery Schedule, Payment Terms & Warranty/Guarantee etc must be clearly indicated in the technical bid.

The bids will be opened at the date and time specified. Further details can be had from the *Administration B4 Section* on all working days during working hours. The bidders are advised to submit their bid well in advance to avoid any kind of network issues. If relevant documents through speed post are not submitted with in time, the tenders will not be considered.

The undersigned reserves the right to reject any or all the tender without assigning any reason whatsoever.

SPECIFICATIONS

BIOINFORMATICS FACILITY

Product No.	Details	No. of Instrument
1.	Server and workstations for high throughput computation analysis (<i>in-silico</i> analysis) Only genomics of biological compounds with 24 TB backup storage facility.	1 server 1 backup storage facility 10 nos workstation
2.	Node computers for data analysis	10 nos
3.	Networking with Wi-Fi facility	5 WIFI Card
4.	Software suite for in-silico analysis (Operating System)	1 suite for each analysis
5.	High resolution printer	5 Nos
6.	UPS supports (25 kVa)	1
7.	backup storage facility	1
8	OS- Linus operating system	1

1. FOR BIOINFORMATICS SERVER SPECIFICATIONS [NOS.1]

- 2X Intel Xeon 20M Cache,8.0GT/s QPI,Turbo,HT,8C,
- 1 Chassis with up to 8, 2.5" Hard Drives, 3 PCIe Slots
- 1 DIMM Blanks for System with 2 Processors
- 1 2133MT/s RDIMMs
- 1 Performance Optimized For Genomics BIG DATA analytics

- 8X 16GB RDIMM, 2133 MT/s, Dual Rank, x4 Data Width
- 1 iDRAC8 Enterprise, integrated Remote Access Controller, Enterprise
- 3 X 2TB SATA HDD 7200 RPM Drives
- 1 PERC H730 Integrated RAID Controller, 1GB Cache
- 1 PERC H830 RAID Adapter for External MD14XX only, 2GB NV Cache, Low Profile
- 1 DVD+/-RW, SATA, Internal
- 1 Dual, Hot-plug, Redundant Power Supply (1+1), 750W
- 2 Deskside Power Cord, GType, 230V,2M (Nepal, Sri Lanka, India)
- 1 PE Server FIPS TPM 1.2,CC
- 2 Long Jumper Cord, C13-C14,4m,12a (APCC except ANZ)
- 1 Broadcom 5720 QP 1Gb Network Daughter Card
- 1 No Operating System
- 1 Ready Rails Sliding Rails With Cable Management Arm
- 1 RAID 5 for H330/H730/H730P (3-24 HDDs or SSDs)

2. WORKSTATION (GENOME STATION HD) [NOS-10]

My Genome Station with i7 Processor

Single Intel Core i7-6700 Processor (Quad Core, 8MB, 8T, 65W)

32GB (4x8GB) 2133MHz DDR4 Memory

2 TB 3.5 inch 7200rpm SATA Hard Disk Drive

Intel Integrated Graphics, Dell USB Optical Mouse (black) and Dell US/European (QWERTY) USB Keyboard (black)

DELL 19.5" Monitor

MyGS - Genome Station powered with proprietary GS-OS, Intel i7 family processor and Intel HD graphics with 32 GB memory for handling smaller NGS data-sets. Optimized for handling RNA-Seq, DNA-Seq, ChIP-Seq, V3/V4 amplicon Seq, small-RNA-Seq with data size less than 25 million reads per data point.

OPERATING SYSTEM

- GS-OS : GS-OS is the operating system that powers My GS. GS-OS is Bionivid's proprietary Linux-Ubuntu based specialized Operating system optimized for enhance performance and analysis of NGS Data, associated file types and analysis pipeline.

HARDWARE

- Performance Optimized Hardware for accelerated analytical processing of NGS data

ANALYSIS PLATFORM

- SQ-IT Software Package: All Genome Stations are supported by Bionivid's proprietary SQ-IT analysis platform. SQ-IT is an advanced analytical software package with ameliorated pipelines and guided workflows for NGS data analysis for RNA sequencing analysis and **Metagenome (V3&V4) sequence data analysis**.
- Based on a simplified user interface, this software package is designed to sync with optimized GS-OS operating systems and processing units for enhanced performance. SQ-IT provides comprehensive and automated analytical reports for accelerated scientific insights without the use of complex command-line interfaces.

PERFORMANCE

- In Silico Proprietary Innovative technologies built, tested and validated to optimize performance based on workload, including improved performance and energy efficiency.
- The improved performance with heterogeneous workloads, optimized cache memory monitoring and allocation technology enabling workload prioritization, consolidation, and resource partitioning to manage efficient use of shared resources.

Service & Support - Training: 1 Day training in your institute

Installation: Remote Installation

Warranty:

Limited Warranty:Yr 1-3 (NBD)

Limited Warranty:Yr 1-3 (POW)

3Yr Onsite Service

3. NODE COMPUTERS FOR DATA ANALYSIS [NOS:10]

My Genome Station with i5 Processor

Single Intel Core i5 Processor

32GB (4x8GB) 2133MHz DDR4 Memory

1TB 3.5 inch 1 TB 7200rpm SATA Hard Disk Drive

Intel Integrated Graphics

Dell USB Optical Mouse (black) and Dell US/European (QWERTY) USB Keyboard (black)

My GS - Genome Station powered with proprietary GS-OS, Intel i5 family processor and Intel HD graphics with 32 GB memory for handling smaller NGS data-sets. Optimized for handling RNA-Seq, DNA-Seq, Chip-Seq, V3/V4 amplicon Seq, small RNA-Seq with data size less than 25 million reads per data point.

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Service & Support

Training: 1 Day training ON SITE

Installation: Remote Installation

Warranty:

Limited Warranty: Yr. 1-3 (NBD)

Limited Warranty: Yr. 1-3 (POW)

3Yr Onsite Service

4. POWER SUPPLY [Nos:1]

One-25KVA on line UPS with 42h batteries 26 no. Warranty as per manufacturer policy

5. PRINTER [Nos:5]

Multi-function black and white laser jet printer from reputed brand (**Copy, print, scan, fax, network and wireless**) ≥ **2 year warranty**

6. External Storage: [Nos: 1]

Rackmount 2U Rack Storage, 24TB,

Up to 12 hot-pluggable 3.5" and 2.5" drives

7. WIFI Card: [Nos:5]

8. OS :

Linux Operating System,

Software

- 1) Next Generation Sequencing Raw Data Quality Control tool with graphical user interface and automated reports
- 2) RNA-Seq analysis pipeline for both Denovo and Re-Sequencing with guided workflow, pipeline user controls, Graphical user interface and automated reports
- 3) Amplicon Metagenomics pipeline with guided workflow, pipeline user controls, Graphical user interface and automated reports
- 4) Open source tools for the following:
 - a) DNA (Eukaryotic) assembly and annotation
 - b) DNA (Prokaryotic) assembly and annotation
 - c) DNA Re-Sequencing Alignment and Variation Calling (SNP Calling)
 - d) SSR prediction
 - e) ChIP Sequencing
 - f) Bisulphite Sequencing