

Tender No:

KDU/PRO/CAP/ 159/2020



General Sir John Kotelawala Defence University,
Kandawala Estate, Ratmalana,
Sri Lanka.
T: Phone: 2632028 , 2622995
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Web: www.kdu.lk

18 / 06 / 2020

INVITATION TO BID AND GENERAL CONDITIONS OF TENDER

1. The Vice Chancellor of the General Sir John Kotelawala Defence University, as the Chairman, Department Procurement Committee Invites Bid/s from prospective Bidders for supply of **item/s listed in the schedule in Annex “A”**. **The relevant specifications of the item/s are indicated in Annex “B”**.

2. **CLOSING DATE & TIME**. The tender will close at 1000 hrs. on 21 / 07 /2020. Any Bid submitted after the closing time of the tender will be rejected & unopened such bids will be returned to the bidder.

3. **VALIDITY OF BID**. The bid submitted under this tender **must be valid for a period of 120 days from the date of closing of tender**.

4. **BID BOND / GUARANTEE**.

(a) If the quoted bid value exceeds Rs: 2,000,000.00, such Bids should be accompanied with 1% of Bid Value an “on demand” and “unconditional” Bid Bond/Guarantee for a sum of **Rs:** in the format given in Annex “C” through a recognized local Bank or Insurance Company registered in Sri Lanka which is authorized by the Insurance Board of Sri Lanka to issue such Bid Guarantees. All Bid Bond/Guarantees should be valid for at least 30 days more than the validity period of bids, ie, for 150 days from the date of Bid opening. **Cheques will not be accepted as Bid Guarantee**.

(b) Submission of insufficient Bid Bond/Guarantee value or period will be considered as a “**major deviation**” and such offer will not be considered for further procurement action and will be rejected.

5. **VALUE ADDED TAX**. The Bidders who bid for locally delivered items must have the VAT registration. The VAT portion must be shown separately in the price schedule in Annex “A” and VAT registration number must be indicated. If the quoted item is exempted from VAT or Bidding Company is not liable for VAT, reference number and date of relevant Act number/Gazette notification/a certificate (as applicable) **issued for the current financial year** from the Commissioner General of Inland Revenue to that effect should be submitted along with the Bid.

6. **BID SUBMISSION**. The **bidder must duly sign at the last page (before Annexes) of this document** indicating the name of the signatory and the name of the company & place the company common seal to confirm the acceptance of tender conditions. **The Bid/s that do not include authorized signature will be rejected**. The Bid/s duly signed by the bidder enclosed and sealed in an appropriate cover addressed to the following address should be sent by registered post or could be deposited in the **appropriate tender box placed at General Sir John Kotelawala Defence University, Kandawala Estate, Ratmalana** (at the Main Entrance of General Sir John Kotelawala Defence University) on or before the time & date specified for the closing of tender. **The tender reference number, date & time of closing tender should be indicated & underlined at the top left corner of the envelop**.

Tender Ref No
Closing Date & Time

The Chairman,
Department Procurement Committee,
General Sir John Kotelawala Defence University,
Kandawala Estate, Ratmalana,
Sri Lanka.

7. The Bid/s must be submitted in the attached schedule of prices in Annex “A” as applicable. However, bidders could use similar formats prepared with their own letter heads with all the details mentioned therein and submit in **three copies along with duly signed copy of a General Conditions of tender**. The Bid/s must contain **Technical Literature, Pamphlets, Drawings and Quality Standard Certificate etc** necessary to determine characteristics of items offered and in case of Machinery/Vehicles & Equipment, servicing and workshop data/after sales service, back up facilities or any other facilities provided by the supplier.

8. **SUBMISSION OF SAMPLES/PAYMENT OF TESTING CHARGES**.

When it is required to submit samples, **every offer** must be accompanied with pre - marked samples. The marking of samples **indicating the Bidder & Offer number** must be done and the samples must be handed over to the officer at same place where tender box is placed **on or before the closing date & time of the Bid**. Samples submitted after closing time of the Bid will be rejected. The documents such as Air Way Bills etc, will not be accepted in place of samples. When the testing charges are required to be paid, bidders shall pay testing charges separately **for all offers** indicated in their bid/s.

(1) **Samples**. Please submit samples.

(2) **Testing Charges**. A sum of Rs. **per offer** must be paid to the Bursar of KDU, prior to the submission of bid and a copy of the receipt must be annexed to the bid. It is the responsibility of bidder to inform the Cashier of the Account Office to note the tender number on the receipt issued for such payments.

8. **BID OPENING**. All duly received bids **will be opened immediately after the scheduled closing time of Bids at the same venue**. Bidders or their accredited agents could be present at the time of opening of bids.

9. **PRICES.**

For locally delivered items (including locally manufactured items & foreign items imported by the bidders) price must be quoted in Sri Lankan Rupees, inclusive of all charges for delivery of items to General Sir John Kotelawala Defence University Ratmalana, Faculty of Allied Health Science (FAHS) Werahera and University Hospital Werahera or Southern Campus Sooriyawewa. **Unit price, VAT and Total price should be clearly indicated in schedule in Annex “A”.** Other than VAT, all other type of taxes (eg : NBT, BTT, etc.) should not be indicated separately and should be included in unit price.

10. **RESTRICTED TENDERS.**

Invitation to Bids are circulated among the registered suppliers with Ministry of Defence (MOD), only bids submitted by registered suppliers will be allowed for consideration. However, Chairman, Department Procurement Committee reserves the right to invite the bids from multiple combinations of Procurement Methods as stipulated in Chapter III of the Government Procurement Guideline, 2006 to ensure highest competitiveness.

11. **PERFORMANCE BOND/GUARANTEE.**

A successful bidder shall furnish a Performance Bond/Guarantee in the form of “On Demand” & “Unconditional” Bank/Insurance Guarantee for a sum equivalent to 10% of the contract value for every contract that exceeds Rs. 500,000.00 or equivalent amount in foreign currency through a recognized Commercial Bank registered in Sri Lanka or through an Insurance Company authorized by the Insurance Board of Sri Lanka to issue such Performance Guarantee for this purpose, **within two weeks from the date of notification of award.** The proceeds of the Performance Bond/Guarantee shall be payable to the Vice Chancellor of the General Sir John Kotelawala Defence University as compensation for any loss resulting from the supplier’s failure to complete his performance obligations under the contract. If the contracted supplier fails to deliver the items on time or fails to complete the works as per the agreed contract, **THE TOTAL VALUE OF THE PERFORMANCE BOND/GUARANTEE** will be forfeited. If only partial delivery is made during the agreed contract period, the corresponding value percentage of undelivered quantity from the Performance Bond/Guarantee will be forfeited.

12. **SIGNING OF CONTRACT.**

The notification of award will be transmitted to the successful bidder by post, by fax or e-mail. This notification constitutes the formation of the contract. The successful bidder should submit his written acceptance for the award and performance bond / guarantee (For awards over Rs. 500,000.00 without VAT) within 14 days of receipt of such notification. Upon acceptance of the award and furnishing of the Performance Bond/Guarantee, the successful bidder will have to enter into a formal contract with the Vice Chancellor of the General Sir John Kotelawala Defence University by signing the Contract.

13. **DELIVERY.**

Preference will be given for early delivery. In case of bulk supplies for locally manufactured items, the delivery of **total quantity must be completed within 120 days of signing of contract,** unless mutually agreed for extended delivery period with General Sir John Kotelawala Defence University. **The bidder/s must indicate the proposed delivery schedule in Annex “D”.** In the event of placing a purchase order with the successful bidder, the total quantity so ordered must be supplied as one consignment unless part deliveries are agreed upon in the contract. The deliveries not made as per agreed delivery schedule will be considered as bad performances by the suppliers and **no extended delivery period will be authorized.** Under extreme unavoidable conditions too, the Chairman, Department Procurement Committee (Vice Chancellor of the General Sir John Kotelawala Defence University) reserves the right to grant or refuse delivery period extensions only within the current financial year with or without liquidated claim for delayed deliveries and that decision will be final.

14. **LIQUIDATED DAMAGES.**

In case of delivery period extensions requested by the successful bidder, a sum equivalent to 1% of the total value of the delayed supply per delay of one week or part thereof may be deducted from the payment due to the supplier from the General Sir John Kotelawala Defence University as liquidated damages up to the maximum limit of 12% of the total value of delayed supplies.

15. **PAYMENT TERMS FOR LOCALLY DELIVERED ITEMS.**

Payment will be made after acceptance of items which should be subjected to a pre-acceptance inspection/testing by General Sir John Kotelawala Defence University authorities. The delivery made to the General Sir John Kotelawala Defence University should not be considered as quantities taken over by General Sir John Kotelawala Defence University until items are properly accepted after pre-acceptance inspection. Any item that does not conform to the specifications or already approved sample will be rejected & it is the responsibility of the supplier to remove them from General Sir John Kotelawala Defence University stores/premises within 07 working days of such intimation (either verbal or written) at his own cost and replace them with items conforming to specification within one month of such rejection. The bidder shall allow approximately 60-90 days’ period of credit from the date of acceptance of items for Account Office, General Sir John Kotelawala Defence University to obtain liquid cash from General Treasury & release the payment.

16. **RIGHTS OF THE PROCUREMENT COMMITTEE.**

The Department Procurement Committee reserve the right to accept or reject whole or part of this tender and their decision will be final. The successful bidders will be notified. Information with regard to rejected or unsuccessful bids will not be communicated.

Thanking You,
Yours faithfully,

J D B Galagoda
For Vice Chancellor
General Sir John Kotelawala Defence University

I/We agree to abide by the conditions of tender and undertake to supply the items as per delivery schedule mentioned in the contract, in the event of an order been placed with me/my firm/company as a result of this tender.

..... Signature

..... Name of Signatory

.....Name of the Company/Bidder

Date :-

Company seal

SCHEDULE OF PRICES FOR LOCALLY DELIVERED ITEMS

S/N	ITEMS	DENO	QTY	PRICE EACH SLRS	TOTAL PRICE SLRS
	<u>PURCHASE OF LABORATORY REQUIRMENT FOR FACULTY OF COMPUTING 02 (high performance computing HPC cluster)</u>				
01	HPC Server Node	NO	01		
02	Login Node for HPC	NO	01		
03	Network Switch for HPC	NO	02		
04	10 kV UPS for HPC	NO	01		
05	42U Server Rack for HPC	NO	01		
	TOTAL				
	DISCOUNT				
	TOTAL(AFTER DISCOUNT)				
	VAT %				
	GRAND TOTAL				

(A) OTHER DETAILS

- (i) DELIVERY PERIOD -
- (ii) MAKE & MODEL -
- (iii) VALIDITY PERIOD -
- (iv) WARRANTY PERIOD -
- (v) PAYMENT TERMS - CREDIT
- (vi) COUNTRY OF ORIGIN -
- (vii) DISCOUNT IF ANY -
- (viii) ANY OTHER TAXES -

(B) VAT DETAILS

- VALUE ADDED TAX PERMANENT REGISTRATION CERTIFICATE / VAT EXEMPTION LETTER ISSUED BY DEPARTMENT OF INLAND REVENUE TO BE ATTACHED

(C) PLACE OF DELIVERY

- ITEMS TO BE DELIVERED TO THE "GENERAL SIR JOHN KOTELAWALA DEFENCE UNIVERSITY, KANDAWALA STATE, RATMALANA ALONG WITH THE COPY OF ORDER AND RELEVANT INVOICE.

- (D) Any queries / information with regard to this procurement / tender could be obtained from Officer Commanding Logistics Services office at General Sir John Kotelawala Defence University through e-mail ocls@kdu.ac.lk and by telephone number 0112622504 during working hours.

NOTE : UNIT PRICE AND TOTAL PRICE ARE TO BE INDICATED CLEARLY IN THE TENDER, IF NOT QUOTATION WILL BE REJECTED.

SUPPLIER NAME -

ADDRESS -

Company Seal

(E) Bid Reference : KDU/PRO/CAP/ 159 /2020

.....
DATE

01. HPC Server Node (1 Unit)

Technical Specification

Item	Mandatory Specification
GPU (Quantity 8)	
Make (please specify)	
Model (please specify)	
Country of Origin (please specify)	
Country of Manufacturing (please specify)	
Year of manufacture (please specify)	
Generation	Tesla
Architecture	Volta
Memory size	32GB
Memory type	HBM2
Connectivity	NVLINK
Total aggregated memory	256GB
Chassis	Vendor should offer Server System of max 4U ,Servers should be independently serviceable
Power and Cooling	Five hot plug fan modules per server. Each module includes one 80mm dual rotor fan on top, one 60mm single rotor fan on bottom.2X HPE 2200W Platinum Hot Plug Power Supply should be included
Management	integrated management port,
GPU/Accelerators	should support up to Eight NVIDIA Quadro RTX6000, RTX8000 and up to Twelve HPE NVIDIA Tesla T4 GPU Modules .8 xTesla V100 32GB Computational Accelerator should be included
CPU	Two nos of 2.4Ghz/20core Intel Xeon-Gold 6148 Scalable family processors
Chipset	Intel C621 Series Chipset

Memory Requirement	24DIMM slots should be available. scalable upto 1.5 TB using DDR4 RDIMM 3TB using LRDIMM(depending on processor model) 512 GB memory should be installed (8 x 64GB LRDIMMS)
Memory protection	Advanced ECC , Memory Online Spare Mode, Memory Mirroring Mode, and Fast Fault Tolerance
Disks scalability	Upto 16 nos of 2.5" SFF SAS/SATA/SSD hard drive bays or 3 LFF disks
storage controller	controller with 4GB cache with battery should be included
Disks required	To be configured with 4X 1.92TB SATA 6G Mixed Use SFF SSD s . Disks should have DO NOT Remove LED feature to avoid manual error of engineer pulling out the wrong disk during failure.
Networking	4 x 1Gbps ports 4 x /10Gb ethernet ports
Infiniband	Should support upto '2 x EDR/HDR & should include 1x InfiniBand EDR/Ethernet 100Gb 2-port card
I/O slots	The compute node should have capability to be configured with minimum 2 no's I/O slots for supporting : 1Gb, 10Gb, 100Gb Ethernet, 100 Gb/s EDR InfiniBand, 100G Omni-Path, and FibreChannel.
OS & Virtualization Support	Red Hat Enterprise Linux (RHEL) (64 bit) 7, 8 <ul style="list-style-type: none"> • SUSE Linux Enterprise Server (SLES) (64bit) 11, 12, 15 • Canonical Ubuntu 16.04.3 - HWE kernel 4.10, LTS 18.04 • Windows Server 2016 (Most recent version)
Industry Standard Compliance	ACPI 6.1 Compliant, PCIe 3.0 Compliant, WOL Support, Microsoft® Logo certifications, PXE Support, USB 3.0 Compliant (internal); USB 2.0 Compliant (external ports via SUV), SMBIOS 3.1, UEFI 2.6, Redfish API
Security	UEFI Secure Boot and Secure Start support, Immutable Silicon Root of Trust, Support for Commercial National Security Algorithms (CNSA), IPMI-compliant Remote Management licenses of Premium/Enterprise Edition, Common Access Card (CAC) 2-factor Authentication, Tamper-free updates - components digitally signed and verified, Secure Recovery - recover critical firmware to known good state on detection of compromised firmware,

	<p>TPM (Trusted Platform Module) 1.2 option, TPM (Trusted Platform Module) 2.0 option, Bezel Locking Kit, Intrusion Security Kit option, Runtime Firmware Validation - Periodically scan essential firmware for compromised code during runtime.</p>
	<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>
Monitoring, Analytics, and Performance	<p>Should have continuous, proactive health monitoring and recording of required system parameters as well as diagnostic telemetry data on a 24x7 basis.</p>
	<p>Should have monitoring & analytics feature for the offered server/chassis along with its sub-components to predict, prevent, and auto-resolve problems and by providing automating case creation and log file submission for the problems that can't be autoresolved.</p>
	<p>Should help simplify the infrastructure management plan by predicting capacity, performance and bandwidth needs.</p>
Warranty	<p>3 Years 24*7 Support (4 hrs response including holidays), local parts depot or spares should be on site</p>
Installation and commissioning	<p>Installation commissioning and testing should be done by the vendor</p>
vendor qualifications	<p>*Bidder should have minimum 10 years experience of selling the quoted product. *Bidder should be an authorized partner for the quoted product. An authorized letter from the principal supplier should be attached.</p>

- Authorization

Supplier should be a Manufacture Authorized Agent in Sri Lanka and Proof should be provided.

- Financial

- a. Delivery period - Bidders to indicate. (Shorter delivery period will be preferred.)
- b. Validity period - To be indicated by the bidders.
- c. Discounts if any - To be indicated by the bidders.
- d. Any other taxes - To be indicated by the bidders.
- e. Vat details - VAT registration no/ exemption letter issued by department of in land revenue to be attached.

2. Login Node (1 Node)

- Technical Specification

Item	Mandatory Specification
Chassis	1U Rack Mountable
CPU	Two numbers of Intel Xeon silver 4210 2.2GHz/10-core processors
CPU L3 CACHE Memory	13.75 MB L3 cache
Motherboard	Intel® C621 Series Chipset
Memory	24DIMM slots. scalable upto 1.5 TB using DDR4 Load Reduced DIMM (LRDIMM) operating at 2600 MHz (depending on processor model) or scalable upto 768GB using DDR4 Registered DIMM (RDIMM) operating at 2600 MHz (depending on processor model) 128GB Memory should be installed
Memory Protection	Advanced ECC with multi-bit error protection, Online spare, mirrored memory and fast fault tolerance
HDD Bays	Up to 8+2 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 dataloss/downtime due to wrong drive removal.
Hard disk drive	Hot Plug SFF sas drives and 800GB SAS 12G Enterprise MU ssd x2 should be installed
Controller	Server should support Onboard SATA software RAID controller supporting SSD/HDD and at least two M.2 drives In addition, server should support one of the below controllers supporting Mixed Mode which combines RAID and HBA mode, 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 (onboard or on a PCI Express slot)or 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 (onboard or on a PCI Express slot) Storage controller should support Secure encryption/data at rest Encryption. controller with 2GB cache with battery should be included
Networking features	Server should support below networking cards: 1. 1Gb 4-port network adaptors 2. 10Gb 2-port Ethernet adaptor 3. 10GBaseT 4-port Ethernet adaptor 4. 4x25Gb Ethernet adaptor 5. 10/25Gb 2-port Ethernt adaptor Infiniband Options: 40Gb dual port or 100Gb Single or Dual port Adaptor 100Gb Single port Omni path adaptor 6 x10Gb Ethernet ports & 4 x1GbE ports should be included
Interfaces	Serial - 1 Micro SD slot - 1 USB 3.0 support With Up to 5 total: 1 front, 2 internal, 2 rear, 2 internal (secure)
Bus Slots	Three PCI-Express 3.0 slots, atleast two x16 PCIe slots
Power Supply	Should support hot plug redundant low halogen power supplies with minimum 94% efficiency 2 x 500W Flex Slot Platinum Hot Plug powe supply unitts should be included
Fans	Redundant hot-plug system fans

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) SMBIOS Redfish API IPMI 2.0 SNMP v3 TLS 1.2 DMTF Systems Management Architecture Active Directory v1.0
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 TPM (Trusted Platform Module) 2.0 Bezel Locking Kit option Chassis Intrusion detection optionSupport for Commercial National Security Algorithms (CNSA) Smart card (PIV/CAC) and Kerberos based 2-factor Authentication Configurable for PCI DSS compliance Secure erase of NAND
Operating Systems and Virtualization Software Support	Microsoft Windows Server Red Hat Enterprise Linux (RHEL) SUSE Linux Enterprise Server (SLES) VMware ClearOS
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
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.
Provisioning	1. Should support tool to provision server using RESTful API to discover and deploy servers at scale 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
Firmware security	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 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>Embedded Remote Management and firmware security</p>	<ol style="list-style-type: none"> 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 2. Server should have dedicated 1Gbps remote management port 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 3. Server should support agentless management using the out-of-band remote management port 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 5. Applications to access the server remotely using popular handheld devices based on Android or Apple IOS should be available 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. 7. Should support managing multiple servers as one via <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
<p>Server Management</p>	<p>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.</p>
	<p>The Dashboard minimum should display a health summary of the following:</p> <ul style="list-style-type: none"> • Server Profiles • Server Hardware • Appliance alerts
	<p>The Systems Management software should provide Role-based access control</p>
	<p>Management software should support integration with popular virtualization platform management software like vCenter, and SCVMM</p>
	<p>Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD.</p>
	<p>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).</p>
	<p>Should help to proactively identify out-of-date BIOS, drivers, and Server Management agents and enable the remote update of system software/firmware components.</p>
	<p>The Server Management Software should be of the same brand as of the server supplier.</p>
<p>Warranty</p>	<p>3 Years 24*7 Support (4 hrs response including holidays), local parts depot or spares should be on site</p>
<p>Installation and commissioning</p>	<p>Installation commissioning and testing should be done by the vendor</p>
<p>vendor qualifications</p>	<p>*Bidder should have minimum 10 years experience of selling the quoted product. *Bidder should be an authorized partner for the quoted product. An authorized letter from the principal supplier should be attached.</p>

- Authorization

Supplier should be a Manufacture Authorized Agent in Sri Lanka and Proof should be provided.

- Financial

- a. Delivery period - Bidders to indicate. (Shorter delivery period will be preferred.)
- b. Validity period - To be indicated by the bidders.
- c. Discounts if any - To be indicated by the bidders.
- d. Any other taxes - To be indicated by the bidders.
- e. Vat details - VAT registration no/ exemption letter issued by department of in land revenue to be attached.

ANNEX”B”

3. Network Switch for HPC (2 Node)

Item	Mandatory Specification
Architecture	Shall be 19" Rack Mountable
	Switch should support at least 24SFP+ ports and 4xSFP56 1/10/25/50G SFP Ports
	Switch should provide 02 X 10G Base-T Connections and 02 x 1G Base-T Connections for servers
	Bidder should quote 02 x 1G SFP (MMF) transceivers per switch
	1 RJ-45 or USB-C serial console port
	1x OOBM Port
	1x USB Port
	1x Bluetooth Dongle for Wireless Provisioning
Resiliency	IEEE 802.3ad LACP support 256 or more LAGs
	Support Microsoft Network Load Balancer
	Full Duplex 40Gbps Stacking Bandwidth between two switches
	Separate data and control paths which keeps service processing isolated to increase security
	Unidirectional Link Detection (UDLD) to monitor link connectivity and shuts down ports at both end if unidirectional traffic is detected.
	Virtual Router Redundancy Protocol(VRRP) to highly available routing
Performance	8GB DDR4 SDRAM, 32GB eMMC flash and 8MB packet buffer
	Shall have switching capacity of 880Gbps or more
	Shall have up to 654 million pps switching throughput or more
	Shall provide 1Gbps Latency of < 1.99 μ s (64-byte packets)
	Shall provide 10Gbps Latency of < 1.49 μ s (64-byte packets)
	Shall provide 25Gbps Latency of < 2.85 μ s (64-byte packets)
	Shall provide 50Gbps Latency of < 2.82 μ s (64-byte packets)
Layer 2 Features	MAC address table size of minimum 32K entries
	VxLAN encapsulation for overlay network in Virtual Network Deployment using BGP-EVPN
	4K or more active VLANs, GARP and MVRP
	IEEE 802.1D Spanning Tree Protocol, IEEE 802.1w Rapid Spanning Tree Protocol and IEEE 802.1s Multiple Spanning Tree Protocol, RPVST+ and Compatible with PVTs+
Layer 3 Features	Dual IP Stack for IPv4 and IPv6
	Support MP-BGP, OSPF, RIPv2, RIPng and Policy Based routing
	IP Multicast routing PIM sparse and dense modes
	DHCP server for IPV4 address for network
	IGMP v2,LLDP, Network DOS filtering
	Domain Name System (DNS) for IP to domain name resolution
QoS and Security Features	Access Control Lists for filtering traffic to prevent unauthorized users from accessing the network
	Powerful QoS feature supporting Strict Priority Queuing (SP), Weighted Round Robin (WRR), SP+WRR
	IEEE 802.1X Port Based Network Access Control client supplicant or web base
	IP SLA for Voice Quality Monitor

	Port security, Broadcast Control
	Integrated Trusted Platform Module (TPM) for Integrity and Switch CPU Protection provide automatic protection against malicious attacks
Management Features	Configuration through secure command-line interface (CLI) over Telnet, SSH, Web and Cloud Management without additional hardware
	Network Config , Audit and Orchestration Software Integration
	Internal Analytics Engine to Run Python Scripts also Possible Download from Global Library
	SNMPv1, v2, and v3, pre configuration Cloud or third-party NMS software for remote branches
	FTP and TFTP support, sFlow for traffic accounting
	Port mirroring to enable traffic on a port to be simultaneously sent to a network analyzer for monitoring
	RADIUS or TACACS+ for switch security access administration
	Network Time Protocol (NTP) or equivalent support
	Dual Flash images and multiple configuration files
	Should support 3rd party integrations via REST APIs
	Power and Environmental Features
Safety and Emission standards including VCCI Class A; CISPR 22 Class A ; CISPR 32 Class A	
Warranty and Support	3 Years manufacture warrant and support
Installation and commissioning	Installation commissioning and testing should be done by the vendor
vendor qualifications	*Bidder should be an authorized partner for the quoted product. An authorized letter from the principal supplier should be attached.

- Authorization

Supplier should be a Manufacture Authorized Agent in Sri Lanka and Proof should be provided.

- Financial

- Delivery period - Bidders to indicate. (Shorter delivery period will be preferred.)
- Validity period - To be indicated by the bidders.
- Discounts if any - To be indicated by the bidders.
- Any other taxes - To be indicated by the bidders.
- Vat details - VAT registration no/ exemption letter issued by department of in land revenue to be attached.

4. 10 kV UPS for HPC (1 Node)

Item	Mandatory Specification
Make (Should be Branded product)	
Model	
Country Origin	
Country of Manufacture	
Max Configurable Power (Watts)	10.0kWatts / 10.0kVA
Other Output Voltages	220, 240
Load Crest Factor	3:01
Topology	Double Conversion Online
Waveform type	Sine wave
Input frequency	40 - 70 Hz
Other Input Voltages	220, 240
Battery type	Maintenance-free sealed Lead-Acid battery with suspended electrolyte : leakproof
Typical recharge time	3hour(s)
Battery Volt-Amp-Hour Capacity	1599
Control panel	Multi-function LCD status and control console
Audible Alarm	Alarm when on battery : distinctive low battery alarm : overload continuous tone alarm
Emergency Power Off (EPO)	Specify
Surge energy rating	600Joules
Rack Height	4U
Maximum Height	17.3CM
Maximum Width	43.8CM
Maximum Depth	61.5CM
Operating Temperature	0 - 40 °C
Operating Relative Humidity	0 - 95 (non-condensing) %
Operating Elevation	0-3000meters
Storage Relative Humidity	0 - 95 (non-condensing) %
Storage Elevation	0-14763.6meters
Approvals	CE, IEC 62040-1-1, IEC 62040-1-2
Standard warranty	2 years repair or replace onsite
RoHS	Compliant
REACH	REACH: Contains No SVHCs

Vender Qualification	Letter from the distributor agent stating the capability authorization for sale support of the quoted product(MAL) and should have authorize Service center for quoted brand
Installation and commissioning	Installation commissioning and testing should be done by the vendor

- Authorization

Supplier should be a Manufacture Authorized Agent in Sri Lanka and Proof should be provided.

- Financial

- Delivery period - Bidders to indicate. (Shorter delivery period will be preferred.)
- Validity period - To be indicated by the bidders.
- Discounts if any - To be indicated by the bidders.
- Any other taxes - To be indicated by the bidders.
- Vat details - VAT registration no/ exemption letter issued by department of in land revenue to be attached.

5. 42U Server Rack (1 Node)

Item	Mandatory Specification
Make :-	Please Specisey
Model :-	Please Specisey
Size Of the Rack :-	Internal -Usable Hight - 42U
	External - (W600 x H2100 X D800)mm
Standard :-	Should be comply with IEC 297 Standard
Rack Structure :-	Should be a bolted type structrue for easy asemble or dismantal,
	including five bend type vertical Colums for Extra strength & it is
	made from 1.2mm EG sheet Metal
Doors & Covers :-	Doors - Front Lockable perforated door & Solid steel door for rear less easy mounting & removing facility.
	Side Covers -lockable & Should be screw less easy mounting & removing facility.
Mounting Rails :-	it should comply with 19" standard equipment mounting & it should
	adjustable to front or back.
Ventilation :-	Top - Fan plate with 3 nos fans 230V AC 100x100mm 50Hz
	Bottom - Louver Plate
Cable Entry :-	Cable Entry Plate for bottom.
Power :-	19" Rack mountable type 12 way power panel with 13A S/O
Powder Coating :-	All parts of the rack should be Epoxy Polyestre powder coated to
	coating thickness of 60-80 Microns. Color should be black RAL 9005
Accessories	4 no of Caster Wheels/ Cagenut,Screws & washers
Cable Management :-	1 Nos Cable Ladder for vertical cable Management.
Warranty :-	5 Years for Manufacturing Defects.
Installation and commissioning	Installation commissioning and testing should be done by the vendor

- Authorization
Supplier should be a Manufacture Authorized Agent in Sri Lanka and Proof should be provided.
- Financial
 - a. Delivery period - Bidders to indicate. (Shorter delivery period will be preferred.)
 - b. Validity period - To be indicated by the bidders.
 - c. Discounts if any - To be indicated by the bidders.
 - d. Any other taxes - To be indicated by the bidders.
 - e. Vat details - VAT registration no/ exemption letter issued by department of in land revenue to be attached.

SPECIMEN FORM OF BID SECURITY

By this Bond we (hereinafter called "the Bidder") and We (name of bank or insurance company) whose registered office is at (hereinafter called "the Surety") are held and firmly bound onto (hereinafter called the Authority") in the sum of for the payment of which sum the Bidder and the Surety bind themselves their successors and assigns jointly and severally by those presents.

Whereas the authority has invited the Tender and other persons to compete tenders in similar terms for the supply of and to submit the same for the consideration of the Authority, and the Bidder proposes to submit to the Authority a Bid (hereafter called "the Bid") in accordance with such invitation, the Bond shall provide security to the Authority that the Bidder will honour certain obligations to be undertaken by him in the Tender in accordance with the following conditions.

Now the Conditions of this Bond are:

- (a) That it shall remain in full force and effect until the earliest of
 - (i) (Date), being () days from (submission date), the date stipulated by the Authority for the submission of tenders, or any prolongation of such date above notified to the Authority by the Bidder and the Surety in writing.
 - (ii) In the event of acceptance of the Tender by the Authority, the date upon which the Bidder provides a performance security to the Authority in accordance with the terms of the contract thereby made between them, or
- (b) Subject to this Bond being in full force and effect, the Surety shall pay the full amount specified in this Bond upon receipt of first written demand form the Authority stating that.
 - (i) The Bidder has withdrawn his Tender during the validity of this Bond, or
 - (ii) The Bidder has failed to provide a performance security to the Authority in accordance with the terms of the tender within 14 days from receipt of intimation of award of the Tender.

No alteration in the terms of the Tender, nor any forbearance of forgiveness in or in respect of neither any matter or thing concerning the Tender on the part of the Authority, nor any objection from the bidder shall in any way release the Surety from any liability under this Bond.

The benefit of this Bond shall not be assignable by the Authority and upon its ceasing to be in full force and effect the Authority shall return the same to the Bidder.

This Bond shall be governed by the laws of Sri Lanka

I executed as a deed on this () day of () 20 ()

For and on behalf of the Bidder

Signed by -----

In the capacity of -----

and by -----

In the capacity of -----

Seal (where applicable)

For and on behalf of the Surety

Signed by -----

In the capacity of -----

and by -----

In the capacity of -----

Seal (where applicable)

DELIVERY SCHEDULE

(IT IS MANDATORY TO FILL THE FOLLOWING SCHEDULE BY THE BIDDER)

TENDER NO :

ITEM :

QTY :

DURATION	QTY
EX STOCK QTY (WITHIN 01 WEEK)	
01MONTH	
02 MONTHS	
03 MONTHS	
04 MONTHS	
TOTAL	

NAME OF THE BIDDER :

SIGNATURE OF BIDDER :

DATE :

COMPANY SEAL :