

DEI Data Center Fail-safe Redundancy at IGH:

1. NAS (Cloud)

(a) Software

- Dual active controllers, NVRAM cache, dual mini-SAS channel backup, 40GbE-ready, SAS 12Gb/s-enabled
- QES operating system which is based on FreeBSD and ZFS
- Data deduplication and compression allows hosting over 500 VDI in one chassis
- Near-limitless snapshots and SnapSync for efficient disaster recovery
- NAS and iSCSI/IP-SAN storage supporting VMware®, Microsoft® Hyper-V, KVM and advanced virtualization features
- Fully supports OpenStack® iSCSI Cinder driver
- Scalable design, over 1 PB total storage capacity
- 5 year warranty - Global warranty inclusive

(b) Hardware

- CPU: Intel® Xeon® Processor D-1531, 6-core 2.4 GHz
- Memory: Total DIMM slots: 4 128 GB ECC RAM (32GB RDIMM x 4)
- Drive Bay: Front: 2.5" / 3.5" x 12 Rear: 2.5" SSD drive bay x 6
- HDD Interface: Front: SAS 12Gb/s, SAS 6Gb/s, Rear: SATA M.2 SSD, RAID 0,1, 5, 6, 10, 5+spare, 6+spare, 10+spare, global hot spare
- HDD Hot Swappable: NEEDED
- 10 GbE LAN Port: 2 x SFP+ 1 40Gb network-ready, iSCSI,
- Gigabit LAN: 4
- PCI-E Slot: 4
- USB 3.1: Option: PCIe USB 3.1 Expansion
- USB 3.0 / USB 2.0: 2
- ODD Expansion Slot: 2X12GBPS SAS Expansion with 12 BAY Expansion REXP 1220 U-RP unit-With RAIL KIT +SAS 12GBPS Cable
- Dimensions (HxWxD) mm: 88 x 442.5 x 530.5
- Fan: 4 (6 cm)
- Power Supply: 2 x 450W, 90-264V
- Max. Concurrent Connections (CIFS): 1500
- Expansion Enclosure: 8 x REXP-1620U-RP / REXP-1220U-RP

2. Switch, Router and firewall

- Switching capacity: 480 Gbps on 8-port 10 Gigabit Ethernet SFP+ model*
- Stacking bandwidth: 480Gbps
- Total number of MAC addresses :32000
- FNF entries: 24,000 flows on 12-port and 24-port Gigabit Ethernet models
- VLAN IDs: 4000
- Relative humidity: 10% to 95%, noncondensing

3. Rack Server

- CPU 2 x Intel® Xeon® 4110 (3.4GHz/8C/11MB L3/85W or 110W)
- Internal Interconnect Two QPI links at 9.6 GT/s Max Memory Upto 16 DDR4 2666 Smart Memory Slots Memory 08 x 16GB 2666Mhz
- Smart Memory HARD DISK Scalability Upto 8 Drives SAS Hot Plug 2.5" Controller PERC H730p +2GB Cache
- OPTICAL DVD Writer Management iDRAC 9 with Lifecycle Controller
- Network 2 x 1GE LOM+ (optional) LOM Riser 2 x 1GE or 2 x 10GE SFP+ or 2 x 10GE BaseT Front & Rear Ports
- Video, 1 x USB 2.0, available USB 3.0, dedicated iDRAC Direct USB / Video, serial, 2 x USB 3.0, dedicated iDRAC network port
- POWERSUPPLY 2 x Inbuilt (550W) WARRANTY 3 Yrs. 24x7 4Hr Onsite

4. Networking and cabling

Networking and Cabling: Structured cabling and Power Distribution & Network:

(a) Power Distribution for Server & Communication Room, Electrical Points, cabling etc.:

The Server Room will be provisioned with UPS Power Distribution System along with MCBs. From the UPS distribution board, electrical cable will be drawn for distribution to the racks. The wiring will be carried out by the bidder by using fire retardant appropriate rating electrical cable, channels etc. For the cooling system, raw power is available at LT Panel (little far from the server room). The bidder is required to install distribution panel and need to connect from the LT Panel, which is used to connect the cooling system. The bidder may need to install additional DBs, if required.

Technical specifications:

- Cables for UPS to DB: Copper, 4core, 25sq.mm
- Cables for UPS DB to PDU & other points: Copper multi strands, 3core, 4sq.mm
- Complete Single Line Diagram should be made and certified by the user before starting the work.
- The wiring will be carried out by the bidder by using fire retardant appropriate rating electrical cable.
- All power rating should be designed in consideration with all the devices involve inside server room.
- Complete distribution should not have any single point of failure.
- Complete distribution panel should be non-compartmentalized type, modular, totally shrouded.
- Bus bars should be of Electrolytic Grade Copper as per EN 13601
- Bus bar support and cover systems are fire retardant as per UL 94 V0.

(b) Power Socket & Plug

Power Socket & Plug for Racks: Single Phase, indoor type IP 65 (latched), 35A, 3pin 2-pole + earth, Single phase 220volts, inter-locked Socket & Plug outlet similar to Lapp EPIC-Industrial connectors.

(c) Network Cabling:

Bidder must adopt structured cabling practices for OFC & UTP cat 6 cables while laying the cable. Proper cable trays/conduits must be used through out the routes as per industry standards. Cable tray should be used of Mild Steel of 300mm X 50mm size each for data and electrical cables. Total length of channel shall be 20mtrs (approx.). The cabling will involve data cabling for Server room, NOC, UPS room, Cooling System, BMS etc. from Network Racks/Group Area.

(d) Cabling and Cable-Trays:

- From each network rack in the server room using Cat 6A & Multi Mode Fiber
- Along with LAN cabling, the bidder should also design and lay cable- trays for Storage System up to the racks in the Data Centre.
- Bidder should ensure that all the cable raceways are adequately grounded and fully concealed with covers. The cables should be appropriately marked and labelled.
- The Data Centre should be equipped with separate ducts for power supply distribution and data/network cable. The duct should be designed in such a way that it is possible to do the retro fitment in future. The ducts should be positioned in accordance with the racks for structured and snarl free wiring. The size of the power cable duct and NOC cable duct should be such that it must be possible to accommodate Wiring needs for Servers. Each cable is required proper dressing and marking at both the ends.

5. Metal Rack for server

Server Racks Specifications: Racks will be used to house all the servers/network/storage devices. Rack is designed as per safety standards to withstand the modern IT infra requirement.

Each Rack should include: Frame of sturdy frame section construction, consisting of 16 x folded rolled hollow frame section punched in 25mm DIN pitch pattern, PU Gasket Side panel, 1.5 mm with PU Gasket, Full Height 19", Angle, Top and Bottom Covers, Two Smart Vertical PDUs.

Rack Height	42U
Rack Width	19"
Max Height	2000mm
Max Width	800mm
Max Depth	1200mm

Color Black / Standard Color
 Front Door Glass with unique lock
 Rear Door Steel
 Load bearing
 capacity 1400 kg
 Standard Warranty 1 year repair or replace

- Covered top and bottom
 - Rear space saving spilt door with 3-point secure locking
 - Lockable & remove able side panels
 - Front door with toughened glass
 - Stationary shelf-1 No/Rack
 - Sliding Shelf – 2No/Rack
 - Provision of fan mounting in top which does not occupy usable “U” space
 - 24 Port patch panel
 - Surface finish: Nano ceramic coated, electro-dip coated primed to 20 microns and powder coated with texture polyester RAL 9005/7035 to 80 to 120 microns , Optimized for high capacity cable management system , Cable access openings with pre-installed brushes.
- Complaint to all security & stability standards and provided integrated electrical grounding

6. Air Conditioner

Two no’s of 1.5 Tone capacity industrial air conditioners for room cooling of Server Room, with auto changeover of desired time intervals.

Make: Hitachi/ Daikin/ O-General, with minimum 5-star rating.

7. UPS - 5 KVA

- Nominal Input Voltage 230 V
- Input Frequency 40-70 Hz
- Input Voltage 100-285 V
- (Output derated linearly to 50% of UPS capacity @< 160V)
- Input Power Factor 0.98
- Output Specifications
- Output Power Capacity 4500 W / 5000 VA 5400 W / 6000 VA
- Nominal Output Voltage 230 V
- Other Programmable Voltages 220 V / 240 V
- Efficiency at Full Load > 94% in Double-Conversion mode > 98% in Green mode
- Waveform Sinewave
- Paralleling
- Parallel Redundancy No Yes (Optional box

- SRCPK0506)
- Bypass Specifications
- Bypass Type Internal Static Bypass (automatic & manual), Opt. External
- Bypass
- Bypass Input Voltage Range 170 V – 270V
- Max Bypass Current 40 A
- Input Protection Circuit Breaker
- Battery Charger Specifications
- Supported Battery Types SMF / Flooded
- Battery Bank Voltage 192 V
- Charger Power / Current 1500 W / 6.5 A max (selectable)
- Environmental Specifications
- Operating Temp 0 – 500C
- (Output derated linearly to 75% of UPS capacity @>400C)
- Storage Temp -150C to 600C
- Operating Elevation 1000m without derating
- Storage Elevation 15000m
- Humidity 0 to 95% RH, non-condensing

Note:

- Transportation cost of all material will be borne by the bidder.
- Successful bidder shall accord facility for inspection/testing of material at their site by a team of institute engineers before start of delivery, if deemed necessary

Terms & Conditions

Note: Bidders must submit the following primary information/documents with the quotation. Bidders will have to indicate these particulars in their quote failing which the offer may be rejected. Please do produce the related documents whenever required by the Institute.

1. Trade License/Company Registration No.
2. Goods / Service Tax Regn. No.
3. Income Tax PAN No.
4. Firm's Bank A/c details
5. The bid is to be submitted in TWO Bid Pattern i.e Technical Bid and Price Bid in **Two separate sealed covers/envelopes**.
6. Bidders are requested to quote rate(s) per unit(s) only in the recognized Accounting units otherwise your quotation will not be accepted.
7. Cost of items shall include installation, support and troubleshooting.
8. Warranty and Support: for Hardware and Software should be explicitly mentioned.
9. Bidders should be OEM/Authorized partner/Authorized dealer of OEM/ Contractors.
10. Bidders should quote rates as per details/specifications mentioned in notice inviting Tender. The Institute reserves the right to place order for each job to single/separate vendor(s) if necessary.
11. Bidders should quote rates on FOR/Free Delivery at the sites specified in the Notice inviting Tender, inclusive of all charges else should mention estimated cost of packing, forwarding, insurance and freight by Rail/Road/Post etc. as the case may be.
12. Bidders must indicate if their rate is inclusive of VAT/Sales Tax and /or Excise Duty.
13. Quotation received after the closing date will not be entertained and revision in the price will render the bid invalid. Quotation should indicate clearly the period of Validity, preferably not less than 45 days.
14. In case of an offer for items having multiple options, you should clearly indicate item-specific price(s). Please quote separate item-wise rate(s), when quotation has been asked for so. For every offer, packing and forwarding charges, Sales/VAT/Service Tax etc. should be shown separately.
14. Bids will be evaluated after equated comparison of offers upon calculating all tax/duty/cess/surcharge/discount/packing/transportation costs, other charges with price and non-compliance of technical and commercial terms will render a bid liable for rejection.
15. Bidders will have to submit Bills/Invoices on dispatch of stores, if ordered, to this office in triplicate duly pre-receipted (and stamped for amount over Rs. 5000/-) and supported by the relevant delivery documents for audit and payment direct to you or to your bankers.
Generally, payments can be expected within one month and are made against acceptance of supplies/ jobs completed and in deserving cases, against shipment documents.
16. No insurance charges are allowed unless otherwise specified and agreed to by us. In the absence of any specific instructions, it will be the responsibility of the supplier to ensure a consignment against transit risk at his own expense if he so desires.
17. The Institute is not bound to accept the lowest rate or any other offer and the acceptance of the offer is entirely at the discretion of the Committee
18. Institute reserves the authority to increase / decrease the quantity (50%) if deemed necessary.
19. The Institute reserves the right to select certain items in single or multiple units and reject the others or all as mentioned in the schedule and to revise or alter the specifications before acceptance of any tender and accept or reject any or all tenders, wholly or partly or close the tender without assigning any reason whatsoever.
20. The Bidder shall be required to submit the amount of Earnest Money Deposit (EMD) Rs.48,000/- as mentioned in the Notice Inviting Tender which is refundable and a non-refundable tender fee for an amount of Rs 200/- (Rupees two hundred only) by way of demand drafts/banker's cheque / FDRs. The demand drafts shall be drawn in favour of **“Registrar, Dayalbagh Educational**

Institute, Agra” payable at Agra. The demand drafts (validity 45 days beyond final bid) for earnest money deposit & tender fee must be enclosed in the envelope containing the bid.

- a) The firm(s) that are registered with the National Small Industries Corporation (NSIC) or Small Scale Industries (SSI) are exempted from furnishing the EMD. Self-attested photocopy of the valid registration certificate must be enclosed with their bid.
 - b) The demand drafts for EMD & tender fee must be enclosed in the envelope containing the technical bid. Any technical bid is found without the demand drafts of EMD and tender fee will be rejected. The Institute will not be liable to pay any interest on such an amount. The EMD shall be forfeited, if the Bidder withdraws its bid during the period of validity of Tender.
21. Arbitration and Laws: In case of any dispute or difference arising out of or in connection with the tender conditions / order and Contract, the Institute and the Supplier will address the dispute / difference for a mutual resolution and failing which, the matter shall be referred for arbitration to a sole Arbitrator to be appointed by the Institute. The Arbitration shall be held in accordance with the provisions of the Arbitration and Conciliation Act, 1996 and the venue of arbitration shall be at Agra only. The resolution of the Arbitrator shall be final and binding on both the parties.
 22. Jurisdiction: The courts at Agra alone will have the jurisdiction to try any matter, dispute or reference between parties arising out of this tender /contract. It is specifically agreed that no court outside and other than Agra court shall have jurisdiction in the matter.
 23. Excise Duty: The Institution is exempted from payment of Excise Duty under notification No.10/97 – Central Excise dt. 01.03.97 issued by Ministry of Science & Technology, Govt. of India. Hence, the offer shall be submitted accordingly incorporated the Integrated Tax(GST).
 24. Customs Duty: In case of Imported Items, please note that we are exempted from payment of Customs Duty in terms of Notification No.51/96-CUSTOMS dated 23.7.1996 as amended from time to time. Issued by Ministry of Science & Technology, Dept. of Scientific and Industrial Research, Government of India, we are eligible for concession of Custom duty.

Registrar, DEI

Annexure-I

Financial Bid Format

	Description	Specifications	Make/Model	Unit	Qty	Quoted unit price in Rs.	Tax	Amount in Rs.
1	NAS (Cloud)	as per specs		pcs	1			
2	Switch, Router and firewall	-do-		-do-	1			
3	Rack server	-do-		-do-	1			
4	Networking and cabling	-do-		-do-	1			
5	Metal rack for server	-do-		-do-	1			
6	AC	-do-		-do-	1			
7	UPS 5KVA	-do-		-do-	1			

Annexure-II

CHECK LIST

1. EMD of Rs. 48,000.00 (Forty-eight Thousand) only by way of DD No..... dated in favour of “**Registrar, Dayalbagh Educational Institute, Agra**” payable at Agra.
2. DD No..... dated.....for Rs.200.00 (Two hundred) only in favour of “**Registrar, Dayalbagh Educational Institute, Agra**” payable at Agra towards cost of Tender Fee.
3. Details of firm, equipment, software, registration with tax authorities–Income Tax/Service Tax etc.
4. PO and Satisfactory report of qualifying projects (Minimum of two) handled by bidders in last 5 years giving date of start, date of completion, cost of project and delay if any attributable to bidder. (Staple all to make one doc).
5. Documents explaining Bidder’s approach particularly to this datacenter equipment laying project describing implementation strategies which may include topology, hardware to be deployed etc.
6. Declaration from the OEM that none of the quoted product will go End of Sale or End of Support for a period of at least five years.
7. Declaration by Agency that they shall be supplying genuine OEM products and any discrepancy.
8. Time schedule for complete development of total project in the form of BAR CHART. (This also has to be part of presentation).
9. Financial Bid in the prescribed Format as given in Annexure-II in a sealed envelope.
10. The bid document along with its annexure downloaded from the web shall be duly signed on each page by the bidder and enclosed along with technical bid in Envelope 1.
11. Any other documents.

NOTE: The Check- List shall be duly filled in, and should be submitted along with the Technical Bid.