

भारतीय सूचना प्रौद्योगिकी संस्थान, इलाहाबाद Indian Institute of Information Technology, Allahabad

An Institute of National Importance by Act of Parliament Deoghat, Jhalwa, Allahabad-211012 (U.P.) INDIA

Ph.: 0532-2922025, 2922067, Fax: 0532-2430006, Web: www.iiita.ac.in, E-mail: contact@iiita.ac.in

Ref. No.: IIIT-A/ENQ/DR(S&P)/398 / 2016

Date: 21st December 2016

Tender Notice

Sealed tenders are invited under **Two Bid Systems** for the **Supply, Installation, commissioning and testing of Network Devices** at Indian Institute of Information Technology, Allahabad. The detailed specifications and terms & conditions are given in **Annexure I, II, III, IV, V, VI, VII, VIII, IX.**

Tender document may be downloaded from the Institute website www.iiita.ac.in and submitted along with Rs.5000/- of tender processing fee in form of DD in favour of "Indian Institute of Information Technology, Allahabad payable at Allahabad.

You are requested to submit the quotation by courier/speed post with complete details of specifications, terms & conditions, warranty/guarantee etc. **upto 24/01/2017 at 12:00 Noon.** Quotations duly sealed may be dropped in the tender box placed in front of the office of Deputy Registrar (S&P), IIIT-Allahabad.

The technical bid received in prescribed proforma will be opened in the presence of the tenderers, or authorized representatives interested to be present, on **24/01/2017 at 03:00 P.M.** The Financial bids of only technically qualified tenderers will be opened after evaluation by the Technical Committee. Basic rate, taxes and freight charges etc. must be quoted separately.

(Dr. Seema Shah) Deputy Registrar (S&P)

Copy to:

> Hon'ble Director for kind information.

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Annexure-I

Technical Bid

(On letter head of the Firm & in a separately sealed envelope)

PROFORMA FOR APPLICATION

1. Name of the firm :
2. Address of the firm :
3. Phone Number (With Code):
4. Proprietor's name:
5. Address of Proprietor: -
6. Proprietor's Phone No. :
7.Email Id:
8. Details of the firm:-
(a)Date from which the firm is operating:
(b)Turnover of the firm during: - FY 2013-14 (₹)
FY 2014-15 (₹)
FY 2015-16 (₹)
(Please attach documentary evidence)
(c) PAN No. :
(d) TIN No. :
(e) Service Tax Registration No. (If any):

- 8. <u>Tender Processing Fee</u>: An amount of Rs.5,000/- (Five Thousand Only) of tender (non refundable) is to be submitted in the form of DD in favour of **Indian Institute of Information Technology Allahabad** payable at **Allahabad**.
- 9.E.M.D.: The tenders should be accompanied in a form of a Demand Draft/FDR or Bank Guarantee in favour of Indian Institute of Information Technology Allahabad payable at Allahabad (Any bid without EMD will not be considered). EMD should be enclosed with the Technical Bid document in a separate envelop. The EMD will be returned to the unsuccessful bidders within 15 days and to the successful bidders after submission of performance bank guarantee of 10% of order value which should be valid for 15 months from date of Installation and commissioning of network devices (valid 3 month beyond the warranty period).

Amount of EMD as below:

Sl. No	Description	EMD Amount	DD No./FDR Date
1.	Supply, Installation and commissioning of Network Devices	₹ 2,50,000/-	

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Annexure-II

General Terms and Conditions of the Tender

- 1. <u>Bid</u>: The tenders are to be submitted in two part viz. "**Technical Bid**" and "**Commercial Bid**" in two separate sealed envelopes separately. The commercial bid will be opened only after acceptance of "Technically Bid".
- 2. Detailed specifications, catalogue/literature of all the items quoted should be supplied with the technical bid.
- 3. **Price Basis:** Rate should be quoted F.O.R. destination at IIIT-A, Deoghat, Jhalwa, Allahabad.
- 4. Warranty: Warranty period should be mentioned separately.
- 5. **Security Deposit:** Security deposit in the form of Demand Draft only issued by a Nationalized Bank of the value of 10% of the contract value, shall be submitted by the bidder. The Bank Guarantee of (L1) vendor will be released after period of one year & 3 months. EMD will be released after receiving of Bank Guarantee/Demand Draft.
- 6. <u>Delivery Schedule:</u> The supply period shall commence from the date of issue of confirm purchase order, Vendor need to supply all material within 6 weeks at IIIT-A premises and completion period for Installation and commissioning of Network Devices at required place is strictly 08 weeks.
- 7. **Payment:** Payment will be made within 15 days after supply, installation, testing, commissioning and satisfactory report of networking committee.
- 8. **Penalty:** If the supply delayed beyond the stipulated time of completion of supply, penalty of 1% per week and maximum up to 10% of the total cost may be imposed at the discretion of competent authority.
- 9. <u>Duty Exemption</u>: The institute is exempted from custom and excise duty in terms of notification No. 51/96-custom dated 23/07/96 and No. 10/97- Central Excise dated 01/03/1997 and is an University established under M.H.R.D. Govt. of India. Certificate to this if, required shall be provided by the Institute.

This is to certify that the Indian Institute of Information Technology, Allahabad is imparting Technical Higher Education in the field of Information Technology, established by Ministry of Human Resources Development, Government of India. The Items is being purchased only for Research & Teaching purposes and not for manufacturing any item for commercial use.

- 10. <u>Transit Permit:</u> Transit road permit in the prescribe proforma shall be made available as per rule by the Institute on the request of the supplier if, required.
- 11. Tender must be quoted in prescribed format on the company/firm letter head.
- 12. **Price:** The rates should be quoted in **Indian rupees.** Only unit prices are to be quoted both in digits and in words. In case of a discrepancy in the two, quoted rates in words will be taken as valid and final.
- 13. It is most essential that it should be mentioned clearly that the price basis, payment terms, works schedule taxes and duties, validity, transportation charges.
- 14. If any defect is found in transit it will be the sole responsibility of the supplier to get it corrected and installed as desired by the user.
- 15. Each tenderer should clearly specify that the tenderer agrees to abide by the conditions of this tender document on their printed letter head indicating here on Sales Tax Registration, FAX, Email, Telephone numbers, etc.
- 16. Quoted rate should be valid for at least 03 (Three) months.

- 17. The lowest rate will not be the only basis of claim to get the order.
- 18. The firm/company's black listed at any stage need not to apply.
- 19. All pages of the tender documents are to be signed and stamped by the tendering firm.
- 20. Director, Indian Institute of Information Technology, Allahabad reserves the right to reject or accept any tender.
- 21. Director, Indian Institute of Information Technology, Allahabad will be the sole arbitrator of all the dispute and his decision will be binding on both the parties.
- 22. Director, Indian Institute of Information Technology, Allahabad reserves the right to alter/modify any or all conditions of this tender notice.
- 23. Quotation should be addressed to Deputy Registrar (S&P), Indian Institute of Information Technology, Allahabad-211012 (U.P.) India.
- 24. Kindly mention enquiry reference number, subject, due date contact address etc on your quotation. Incomplete quotation will not be accepted.
- 25. Kindly quote your email ID and Bank details etc.
- 26. All disputes are subject to Jurisdiction of Allahabad.

For any query pertaining to this bid correspondence may be addressed to:

Dr. Seema Shah Deputy Registrar (S&P) IIIT-Allahabad, Jhalwa Campus Phone: +91 0532-2922217, 2051

E-mail: info.purchase@iiita.ac.in

Deputy Registrar (S&P)

Certified that the information in the proforma is true. I/We agree to the contents of terms & condition of the quotation/tender.

Seal and Signature of the Proprietor/Authorized Representative

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Annexure-III

Technical Terms and conditions

- 1. **Supplier Capability:** The bidder should have Technical expertise in networking related work, which includes installation, configuration, commissioning and testing etc. as per requirement.
- 2. <u>Installation, Warranty:</u> The vendor will install and configure all required network devices.
- 3. The tenderer should give full details of being the manufacturer or sole distributor of the items with documentary evidence/authorization letter specific to this tender.
- 3. <u>Authorization</u>: The tenderer should be an authorized dealer of the Equipment /Original Equipment Manufacturer (OEM) and a certificate to this effect should be enclosed with the technical bid. Preference will be given to the firm, if Manufacturer. The bidder need to submit manufacture authorization from specific to this tender number.
- 5. Annual Turnover of the firm should be 5 crore or higher for the last two financial years. (Profit and loss account duly certified by CA should be provided as attachment with each bid). (Documentary proof required).
- 6. The vendor should have supplied single minimum order of 1.5 Crore or above for the Computer Networking items in last two years (Documentary proof required).

Signature of the tenderer

Seal of the firm

Annexure-IV

Scope of Work

In separate sealed envelope, quotations are invited for time bound execution of the cable laying work as per annexed layout for data wiring across two admin Extensions Blocks and Boys Hostel - V Building of the institute campus.

The work is in the outdoor as well as indoor and soil digging and bricks work are involved as per norms. New installation and integration with existing LAN setup includes but is not limited to the following tentative work as per given specification:

1. Laying of Data Cables

- a) OFC (12/24 Core) Armored (underground/conduit)
- b) CAT6a for data network (conduit)
- 2. Cable will be routed through HDPE pipe in underground trench which will be covered by sand and bricks. (Approximate 100-meter digging is required to lay the cable with HDPE pipe).
- 3. Trench depth will be 1 meter (3 feet) along the entire route.
- 4. Brick-chamber of size 1.2x1.2x2 M will be made at each junction, crossing and turning points as per requirement.
- 5. All the brick-chambers will be connected using HDPE pipe and covered with concrete top of standard thickness.
- 6. All the cables will be routed through HDPE pipe (Pipe will be provided by the Institute).
- 7. Cable route will be properly marked with standard flags (Iron/Stone)
- 8. Proper Termination of OFC Cable in wall mount LIU.
- 9. Wireless Access Points require installation at designated locations on each floor to give full & maximum wifi coverage.
- 10. Indoor UTP Cable Laying through PVC Pipe, Casing including all materials at required places.
- 11. Laying and Termination (Crimping & Punching) of CAT6a UTP Cable to IO at required places. All cabling must be "structured".
- 12. Installation of IO/Patch Panel/Rack/Switch and System Integration with proper feruling
- 13. Patch cord should be from a reputed branded and factory crimped.
- 14. Labeling of Cables, installation of I/O ports, Jack Panel, Switches for new connections.
- 15. Installation and termination of cable will be done as per standards
- 16. The installation of equipment's shall be accepted only after installation tests are over.
- 17. Fiber optic cable laying in HDPE pipe in ground including excavation of all types of soil, sand cushioning, protective covering and refilling the trench including cutting of roads and making the roads, etc as required.
- 18. Mounting of LIU Boxes on walls.
- 19. Splicing with proper Feruling of Optical Fiber Cores in LIU Box.
- 20. Fixing of HDPE pipe with the accessories on the surface of wall / ceiling / column, etc. with clamps, saddles, screws, etc as required.
- 21. Fiber optic cable pulling in HDPE pipe on the wall/ ceiling/ column, etc. as required.
- 22. Fixing of PVC Casing with accessories on the surface of wall / ceiling / column etc. with clamps, saddles, screws, etc as required.
- 23. UTP Cable laying and encapsulation in PVC Casing on the wall/ Ceiling / Column, etc. as required.
- 24. Installation & Termination of Jack/Patch panel.

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25. Installation and Termination of Information Outlet with proper numbering (ferruling).

26 Installation of Racks.

27. Testing and Certification for cabling & Points.

28. Fiber Optic Termination (Core Splicing) and Installation Charges.

29. Installation of Air-conditioners

30. Integration and Documentation for Complete Network (Hard and Soft copy).

31. Any other additional item/service required to complete the Supply, Installation and commissioning of Network Devices at BH-V and both Admin Extension.

32. Tentative Network Layout for both BH -V and Admin extension should be as per annexure VIII and IX to provide network connectivity to both Admin extensions and BH-V from Central Server Room.

33. Work will be verified by designated IIITA personnel and certified by working agency.

Important Note:

1. Interested agencies may visit the site before quoting their rate.

2. There should not be any hanging or uncovered wire.

3. Repair/Refurnishing work owing to damage caused due to cabling or any other work related to this project shall be borne by working agency.

4. In case of additional quality of material required, the firm will have to supply the additional items on the same approved rates.

5. The scope of quantity deviation may be upto 10%.

6. Equipment furnished shall be complete in every respect with all mountings, fittings, fixtures and standard accessories normally provided with such equipment's and/or needed for erection, completion and safe operation of the equipment's as required by applicable codes though they may not have been specifically detailed in the tender document, unless included in the list of exclusions. All similar standard components/parts of similar standard equipment's provided shall be inter-changeable with one another.

7. The Bidder shall be responsible for providing all materials, equipment's, and services, permission (Nagar Nigam, PWD etc.) specified or otherwise, which are required to fulfill the intent of ensuring operability, maintainability and reliability of the complete equipment covered under this specification within the quoted price. This work shall be in compliance with all applicable standards, statutory regulations and safety requirements in force on the date of award of

this contract.

8. The bidder shall also be responsible for deputing qualified personnel for installation, testing, commissioning and other services within the scope of work as per this specification. All required tools and services for completing the work as per the specification is also the responsibility of the bidder.

9. The bidder should ensure that during installation of this LAN, day-to-day functioning of official work and existing network setup/connectivity/internet

connectivity should not be disrupted.

10. Powering on equipment after ensuring correctness of terminations interfaces and power supply and making the system ready for testing and commissioning.

- 11. Testing of LAN Cables after laying, terminations and ferruling at both the ends. All testing tools and instruments shall be brought by the bidder and taken back after the testing.
- 12. Site acceptance tests to establish satisfactory performance of the equipment's as per specifications.
- 13. Complete maintenance, operation and Assistance for familiarization and operation of the installed system & services for 1 year after acceptance of system will be under working agency. One onsite skilled service engineer during the above said period should be deputed.

14. Onsite warranty for all Installation and Hardware delivered for minimum one year (Higher if exclusively asked) and extended as per OEM guarantee/warranty

offered.

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Annexure-V

Bill of Quantity

-	(To be attached with t	echnical bid)	
S1. No.	Specification	Make/ Model required	Qty
1	Rack 9U with Auto Surge Protection Power strip and Mounting Kit	Comrack/Dlink/ Tripplite/Sterlite	5 Nos.
2	Rack 16U with Auto Surge Protection Power strip and Mounting Kit	Comrack/Dlink/ Tripplite/Sterlite	18 Nos.
3	Rack 42U on Wheels with Auto Surge Protection Power strip	Comrack/Dlink/ Tripplite/Sterlite	6 Nos.
4	L3 Switch, 2x24 Port SFP module card with Populated 48 Single Mode Transceiver, 7L-E Supervisor with Redundant Supervisor, 1x48 Port Gbic RJ45 module card, 2x2800W Redundant Power Supply, 03 Year Smart Net 8x5xNBD, Appropriate power cables (Details Specification as per Annexure-VI-(A) (i)	Cisco,HP,Juniper	1 Nos.
5	24-Port Gigabit Managed Ethernet L-2, Two SFP populated OFC Module (Details Specification as per Annexure-VI-(A) (ii)) 15 Year Onsite Warranty	Cisco,HP,Juniper	61 Nos.
6	Wireless Access Point (PoE) with wall mounting kit (Details Specification as per Annexure-VI-(A) (iii)) 3 Year Onsite Warranty	Cisco,Aruba,Ruckus	58 Nos.
7	Ethernet Patch Cord (CAT- 6E, 01 Meter)	Dlink	1700 Nos.
8	24-Core OFC Armored Cable (Single Mode)	Dlink/ Digilink/ Molex/Amp	1800 mtr. approx
9	12-Core OFC Armored Cable (Single Mode)	Dlink/ Digilink/ Molex/Amp	200 mtr. approx
10	6-Core OFC Armored Cable (Single Mode)	Dlink/ Digilink/ Molex/Amp	1000 mtr. Approx
11	I/O CAT-6E with Faceplate & SMB	Dlink	350 nos. approx
12	CAT-6E Cable	Dlink	25 Bundle approx
13	SC Pigtail to Terminate the Fiber (1 Meter)	Dlink	800 Nos.
14	Casing Capping with Accessories	Dlink	5000 mtr. Approx
15	Rack Mount Fiber LIU 24- core	Dlink	15 Nos.
16	Rack Mount Fiber LIU 12- core	Dlink	27 Nos.
17	LC-LC OFC Patch Cord Pair (Single Mode) 3 Meter	Dlink	40 Nos.
18	SC-LC OFC Patch Cord Pair (Single Mode) 3 Meter	Dlink	60 Nos.
19	SC-SC Patch Cord Pair (Single Mode) 3 Meter	Dlink	30 Nos.
20	Split AC for Server Room 2 Ton	Voltas/Carrier/ Panasonic/Hitachi	1 Nos.
21	SERVICE WORK (Installation Commissioning and testing)		

Signature of the tenderer Seal of the firm

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Annexure-VI-(A)

Technical Compliance

(To be attached with technical bid)

Annexure -VI-(A) (i)

A- Active Components

	Active component L3 Switch Make (Cisco			
S1. No.	Specification	Make/Model offered by the vendor	Compliance (Yes/No)	Deviation (If any)
1.	seven slots			
2.	The switch should have redundant supervisor engine having 4*10 Gigabit Ethernet uplinks (SFP+) ports on each supervisor card.			
3.	The switch should have 48 Gbps/slot and total system bandwidth of 848 Gbps and 250 Mbps of			
4.	throughput . 2x2800W Redundant Power Supply			
5.	The switch should have 128K flexible NetFlow entries in hardware			
6.	The switch should support up to 240 ports of 10/100/1000 or 240 ports of GbE Small Form-Factor Pluggable (SFP) or 96 ports of 10GbE SFP+ ports			
7.	The switch should be configured with two 24*1000BASE-LX/LH SFP transceiver and 24*10/100/1000 BaseT ports (ie. Total 48 port with transceiver).			
8.	The switch should have Scalable routing (IPv4, IPv6, and multicast) tables, Layer 2 tables, and access control list (ACL) and quality of service (QoS) entries to help ensure 8 queues per port and comprehensive security policies per port			
9.	The switch should be based on modular operating system having open application platform for virtualized services.			
10	The switch should support Nonstop Forwarding/Stateful Switchover (NSF/SSO) and In- Service Software Upgrade (ISSU) for maximum resiliency with redundancy			
11	The switch should support multi-VRF for Layer 3 segmentation			
12	The should be smart enough for Automation through Embedded Event Manager (EEM), AutoQoS, and Auto SmartPorts for fast provisioning, diagnosis, and reporting.			
13	The switch should have optimized application performance through deep visibility with flexible NetFlow supporting rich Layer 2/3/4 information (MAC, VLAN, TCP flags) and synthetic traffic			
14	monitoring with IP service-level agreements (SLAs) The switch should have energy-efficient design to manage the network, PoFP endpoints, and PCs			
15	manage the network, PoEP endpoints, and PCs Warranty & Support - 03 Year onsite warranty along with 8x5x NBD telephonic support direct from OEM with Proper support contract number provided by OEM			

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Annexure- VI-(A) (ii)

2. Active component L2 Switch Make (Cisco/HP/Juniper)

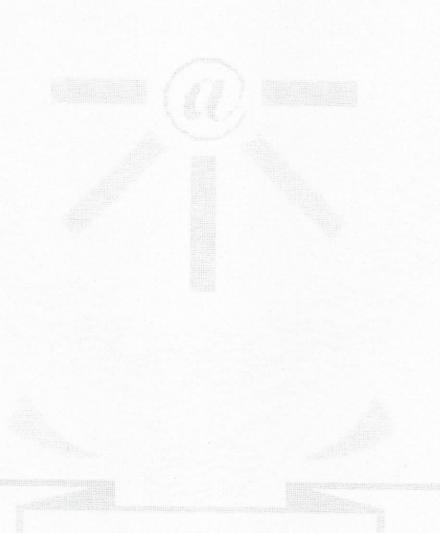
SI. No.		Specification	Make / Model offered by the vendor	Compliance (Yes/No)	Deviation (If any)
2	4-port 10/100/1	000 Base-T POE L2+ Managed Switch			
		with Fiber Uplinks			
		26 # 10/100/1000 Base-T POE RJ-45			
1	Interfaces	auto-sensing ports with 2Gigabit			
1.		Ethernet combo.			
		The switch will be supplied with			
2.	CPU/ Memory	2x1000BASE-LX/LH SFP transceiver. 128 MB and 16MB flash			
2.	Of O/ Memory	Switching fabric: 56Gbps Line-rate			
		(non-blocking fabric)			
		Throughput: 41Mpps			
		Address database size: 16,000 MAC			
	Performance	addresses			
	Summary	VLAN ID Range: 1 - 4096			
3.		Support for IEEE 802.3ad Link			
		Aggregation Control Protocol (LACP)			
		Up to 8 ports per group with 16			
		candidate ports for each (dynamic)			
		802.3ad link aggregation			
		supports 1K multicast groups (source-			
		specific multicasting is also supported)			
		Spanning Tree Protocol (STP)			
		VLAN and Voice VLAN			
	L2 Services	Multicast TV VLAN			
		Q-in-Q VLAN			
		Generic VLAN Registration Protocol			
		(GVRP)/Generic Attribute Registration			
4.		Protocol (GARP)			
		Unidirectional Link Detection (UDLD)			
		Dynamic Host Configuration Protocol			
		(DHCP) Relay at Layer 2		*	
		Internet Group Management Protocol			
		(IGMP) versions 1, 2, and 3 snooping IGMP Querier			
		Head-of-line (HOL) blocking			
		Wirespeed routing of IPv4 packets Up			
		to 512 static routes and up to 128 IP			
		interfaces			
		Classless Inter-Domain Routing (CIDR)			
		Configuration of layer 3 interface on			
	L3 Services	physical port, LAG, VLAN interface or			
	Lo Services	Loopback interface			
		Relay of DHCP traffic across IP			
5.		domains			
		Relay of broadcast information across			
		Layer 3 domains for application			
		discovery or relaying of BootP/DHCP			.7
		packets			
		Switch functions as an IPv4 DHCP			
		Server serving IP addresses for			
		multiple DHCP pools/scopes Support			
6.	Security	for DHCP options			
· .	Scourry	Secure Shell (SSH) Protocol& Secure			

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		Sockets Layer		
		Secure Sockets Layer (SSL)		
		802.1X: RADIUS authentication and		
		accounting, MD5 hash; guest VLAN;		
		unauthenticated VLAN,		
		single/multiple host mode and		
		single/multiple sessions Supports		
		time-based 802.1X Dynamic VLAN		
		assignment		
		Should have security mechanism to		
		protect the network from invalid		
-		configurations. A port enabled for		
		BPDU Guard is shut down if a BPDU		
		message is received on that port.		
		STP Root Guard		
		DHCP snooping		
		IP Source Guard (IPSG)		
		Dynamic ARP Inspection (DAI)		
		IP/Mac/Port Binding (IPMB)		
		Secure Core Technology (SCT)		
		Secure Sensitive Data (SSD)		
		Layer 2 isolation Private VLAN Edge		
		(PVE) with community VLAN		
		The ability to lock Source MAC		
		addresses to ports, and limits the		
		number of leaves 1 MAC 11		
		number of learned MAC addresses.		
		Supports RADIUS and TACACS		
		authentication.		
		Broadcast, multicast, and unknown		
		unicast		
		RADIUS accounting		
		DoS prevention		
		Support for up to 512 ACL rules		
		4 hardware queues		
		Strict priority and weighted round-		
		robin (WRR) Queue assignment based		
		on DSCP and class of service		
		(802.1p/CoS)		
	Quality of	Port based; 802.1p VLAN priority		
	Service (QoS)	based; IPv4/v6 IP precedence/type of		
7.		service (ToS)/DSCP based;		
/.		Differentiated Services (DiffServ);		
		classification and re-marking ACLs,		
		trusted QoS.		
		Ingress policer; egress shaping and		
		rate control; per VLAN, per port, and		
		flow based.		
		A TCP congestion avoidance algorithm	HOS -	
		is required to minimize and prevent		
		global TCP loss synchronization.		
		IPv6 host mode		
		IPv6 over Ethernet Dual IPv6/IPv4		
		stack		
	IPv6	IPv6 neighbor and router discovery		
		(ND) IPv6 statalogg address and		
8.		(ND) IPv6 stateless address auto- configuration		
		Path maximum transmission unit		
		(MTU) discovery		
		Duplicate address detection (DAD)		
		ICMP version 6		

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9.	LEDs	System, Link/Act, Speed, LED power saving option	
10.	Certifications	UL (UL 60950), CSA (CSA 22.2), CE mark, FCC Part 15 (CFR 47) Class A	
11.	Warranty	Warranty & Support - 15 Year onsite warranty.	



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Annexure- VI-(A) (iii)

3. Active component Wireless Access Point Active component (Cisco/Aruba/RUCKUS)

S1. No.	Specification	Make / Model offered by the vendor	Compliance (Yes/No)	Deviation (If any)
1.	Access point should have serial/console port			
2.	Must have a robust design for durability, without visible vents			
3.	Must have an industrial design for durability, with steel cases, industrial grade antenna connectors, without visible vents, and with metal locking points.			
4.	Mounting kit should be standard from OEM directly.			
5.	Must include dual band antennas to support both the 2.4GHz and 5GHz operations simultaneously from single antenna.			
6.	Access point should be modular and support expandable modules to support 802.11ac wave 2 or a third radio for wIPS for future protection.			
7.	Must support 4x4 multiple-input multiple-output (MIMO)	-		
8.	Must support upto 23dbm of transmit power in both 2.4Ghz and 5Ghz radios.		>	
9.	Should support spectrum analysis and security scanning using a dedicated hardware separate from the radio serving the clients with 80MHz channel support			
10.	Must have -100 dB or better Receiver Sensitivity.			
11.	Should be able to detect atleast 20 sources of non 802.11 interference within 30 seconds			
12.	Access point should able to do the spectrum scanning for WiFi and non-WiFi interference at all 20Mhz, 40Mhz and 80Mhz channels	*		
13.	Must support Reliable Multicast to Unicast conversion to maintain video quality at AP level			
14.	Must support QoS and Video Call Admission Control capabilities.			
15.	Access Point should 802.11 DFS certified			
16.	Warranty & Support - 03 Years onsite warranty along with 8x5x NBD telephonic support direct from OEM with Proper support contract number provided by OEM			

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Annexure-VI-(B)

B- Passive Components

SI No.	Specification	Make/ Model	Make / Model offered by the vendor	Compliance (Yes/No)	Deviation (If any)
1	Rack 9U with Auto Surge Protection Power strip and Mounting Kit	Comrack/Dlink/ Tripplite/Sterlite			
2	Rack 16U with Auto Surge Protection Power strip and Mounting Kit	Comrack/Dlink/ Tripplite/Sterlite			
3	Rack 42U on Wheels with Auto Surge Protection Power strip	Comrack/Dlink/ Tripplite/Sterlite			
4	Ethernet Patch Cord (CAT-6,01 mtr)	DLink			
5	24-Core OFC Armored Cable (Single Mode)	DLink/Digilink/ Molex/Amp			
6	12-Core OFC Armored Cable (Single Mode)	Dlink/ Digilink/ Molex/Amp			
7	6-Core OFC Armored Cable (Single Mode)	DLink/Digilink/ Molex/Amp			
8	I/O CAT-6 with Faceplate & SMB	DLink			
9	CAT-6 Cable	DLink			
10	SC Pigtail to Terminate the fiber	Dlink			
11	Casing Capping with Accessories				
12	Rack Mount Fiber LIU 24- core	Dlink			
13	Rack Mount Fiber LIU 12- core	Dlink			
14	LC-LC OFC Patch Cord in Pair Single Mode Three Meter	Dlink			
15	SC-LC OFC patch cord in Pair Single Mode Three Meter	Dlink			
16	SC-SC OFC patch cord in pair Single Mode Three Meter	Dlink			

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Annexure-VI-(C)

C- Other Components

1. Additional Item:

SI No.	Specification	Make/ Model	Make / Model offered by the vendor	Compliance (Yes/No)	Deviation (If any)
1	Split AC for Server room 2 Ton	Voltas/ Carrier /			
1.		Panasonic/ Hitachi			

2. Laying Of Cable & Commissioning Of Supplied Items

S No	Specification	Compliance (Yes/No)	Deviation (If any)
1	Constructing brick chamber, walls of brick chamber having internal dimensions of 1.2m x 1.2m x 2m. wall thickness of 9" using cement mortar mix of 1:5 (1: cement 5: fine sand). Chamber Cover with Iron frame at chamber side two handle, weight at least 7.5 kg.		
2	Installation and commissioning of Network Devices and passive items as mentioned in annexure IV and V in accordance to the scope of work at BH V and both Admin Extensions (Wing-A, Wing-B) under Network Committee		

3. List of Documents proof:

S1 No.	Specification	Compliance (Yes/No)	Deviation (If any)
1.	Supplier capability (As per point no.1 of Annexure-III)		(
2.	Adherence of installation & warranty as per point no.2 of Annexure-III.		
3.	Copy of certificate manufacturer authorization form as per point no.3,4 of Annexure-III.		
4.	Annual turnover proof as per point no. 5 of Annexure-III		
5.	Supply order proof as per point no.6 of Annexure-III		

Note-Vendors are required to submit technical compliance sheet as prescribed Proforma. Unfilled signed compliance sheet will not be accepted.



Annexure-VII

Financial Bid

(On letter head of the Firm & in a separately sealed envelope) 1) Active Components:

SI No.	Specification	Make/ Model	Qty.	Unit Price	Total amount		
1.	L3 Switch, 2x24 Port SFP module card with Populated 48 Single Mode Transceiver, 7L-E Supervisor with Redundant Supervisor, 1x48 Port Gbic RJ45 module card, 2x2800W Redundant Power Supply, 03 Year Smart Net 8x5xNBD, Appropriate power cables (Details Specification as per Annexure-VI-(A) (i)	Cisco,HP,Juniper	01 nos.				
2.	24-Port Gigabit Ethernet L-2 Managed switch with 12 PoE, Two SFP populated OFC Module (Details Specification as per Annexure- VI-(A)(ii)) 15 Year Onsite Warranty	Cisco,HP,Juniper	61 nos.				
3.	Wireless Access Point (PoE) with wall mounting kit (Details Specification as per Annexure-VI-(A)(iii)) 3 Year Onsite Warranty	Cisco,Aruba,Ruck us	58 nos.				
	Total-						
	Taxes if any-						
	Net Total (A)						

2) Passive Components:

S1 No.	Specification	Make/ Model	Qty.	Unit Price	Total amount
1	Rack 9U with Auto Surge Protection Power strip and Mounting Kit	Comrack/Dlink/ Tripplite/Sterlite	5 Nos.		
2	Rack 16U with Auto Surge Protection Power strip and Mounting Kit	Comrack/Dlink/ Tripplite/Sterlite	18 Nos.		
3	Rack 42U on Wheels with Auto Surge Protection Power strip	Comrack/Dlink/ Tripplite/Sterlite	6 Nos.		
4	Ethernet Patch Cord (CAT-6,01 mtr)	DLink	1700 nos.		
5	24-Core OFC Armored Cable (Single Mode)	DLink/Digilink/ Molex/Amp	1800 mtr. Approx.		
6	12-Core OFC Armored Cable (Single Mode)	Dlink/ Digilink/ Molex/Amp	200 mtr. approx		
7	6-Core OFC Armored Cable (Single Mode)	DLink/Digilink/ Molex/Amp	1000 mtr. Approx.		
8	I/O CAT-6 with Faceplate & SMB	DLink	350 nos. each Approx.		
9	CAT-6 Cable	DLink	25 Bundle Approx.		

DVX

10	SC Pigtail to Terminate the fiber	Dlink	800 nos.		
11	Casing Capping with Accessories		5000 mtr. Approx		
12	Rack Mount Fiber LIU 24- core	Dlink	15 nos.		
13	Rack Mount Fiber LIU 12- core	Dlink	27 nos.		
14	LC-LC OFC Patch Cord in Pair Single Mode Three Meter	Dlink	40 nos.		
15	SC-LC OFC patch cord in Pair Single Mode Three Meter	Dlink	60 nos.		
16	SC-SC OFC patch cord in pair Single Mode Three Meter	Dlink	30 nos.		
	Total- Taxes if any-				
		otal (B)			

3) Additional Item:

S1 No.	Specification	Make/ Model	Qty.	Unit Price	Total amount
2.	Split AC for Server room 2 Ton	Voltas/ Carrier / Panasonic/ Hitachi	01 nos.		
	Net Total (C)				

4) SCHEDULE OF QUANTITIES & PRICES FOR CABLE LAYING & COMMISSIONING, ETC.

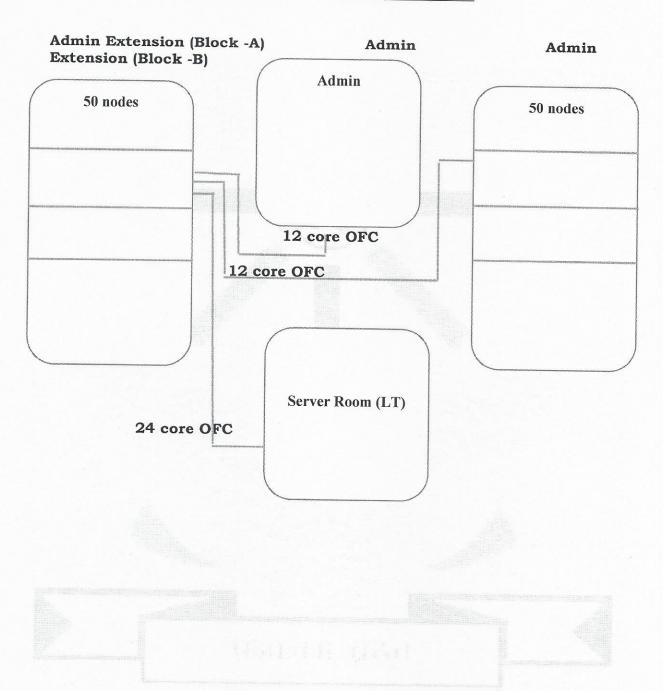
S No	DESCRIPTION OF ITEMS	QTY/UNIT	Unit Price	Total amount
1	Constructing brick chamber, walls of brick chamber having internal dimensions of 1.2m x 1.2m x 2m. wall thickness of 9" using cement mortar mix of 1:5 (1: cement 5: fine sand). Chamber Cover with Iron frame at chamber side two handle, weight at least 7.5 kg.	10		
2	Installation and commissioning of Network Devices and passive items as mentioned in annexure IV and V in accordance to the scope of work at BH V and both Admin Extensions (Wing-A, Wing-B) under Network Committee	1		
	Total-		STEP AND DESCRIPTION OF THE STATE OF THE STA	
	Taxes if any-	participate a respective and the second	tonal in the second	
	Net Total (D)			
	Grand Total (A+B+C+D)			

Signature of the tenderer Seal of the firm

On X

Annexure-VIII

Network Layout of Admin Extension



Annexure-IX

Annexure - I Proposed Network Layout of BH-S Wing -1 Wing -2 ist H 2nd 3rd 6th 1st 2nd 3rd sth 6 core 6 core 6 core 5 core 6 core 6 core 6 core 6 core Pack (42 U) -01 (for Fiber PP and Ethernet 42 U Back -01(for Fiber PP and Ethernet switches) switches) Total no. of fiber core - 36+48=84(6 core coming Total no. of fiber core - 36+46=84(6 core coming from each floor, 48 core from CSR8H-5) from each floor, 48 core from CSRBH-5) GF-SR GF -SR 24 core Wing -324 core 24 core 131 2nd 3rd 6 core 6 core 6 core Pack (42 U) -01 (for Fiber PP and (Adjacent room for L-3 switches) Ethernet switches) L-3 switch = 01 Total no. of fiber core - 36+48=84(6 core coming from each floor, 48 core One 42 U Rack to Install all L-3 Switch from CSRBH-5) One 42 U Rach (To terminate all Fiber GF-SR 24 core

Fiber to be laid for up-link and redundant Line:

