

**TENDER FOR
UP GRADATION OF COMPUTER HARDWARE AND SOFTWARE**

TENDER NO: IMUV/2015-16/Admn/IT/003/1

DATED: 15-01-2016



**INDIAN MARITIME UNIVERSITY
VISAKHAPATNAM CAMPUS
GANDHIGRAM
VISAKHAPATNAM - 530005
ANDHRA PRADESH**

Telephone-0891-2578360-64

Fax-0891-2577754

Email: it@nsdrc.res.in

SECTION 1
NOTICE INVITING TENDER

- 1.1 Indian Maritime University, Visakhapatnam Campus invites sealed tenders from reputed systems integrators and computer hardware suppliers for Supply, Installation and commissioning of hardware, software and networking.
- 1.2 IMUV proposed to dispose the existing servers on buyback basis. The buyback items will be available for inspection by the tenderers on Pre-bid meeting day at IMUV, Visakhapatnam.
- 1.3 The tender document can be downloaded from the web site www.nsdrc.com or www.nsdrc.res.in. Or can be obtained from IMU Visakhapatnam Campus, Gandhigram, Visakhapatnam 530 005 during the weekdays from Monday to Friday between 09.30 AM and 17.30 Hrs on payment of the cost of the tender document. The cost of the tender document is **(Rs.1000/-)**. In case the tender document is downloaded, the cost of the document is to be paid along with the submission of the tender documents by way of Demand Draft on any nationalized/schedule bank favoring Indian Maritime University, Visakhapatnam Campus, payable at Visakhapatnam, failing which the tender shall be summarily rejected.
- 1.4 Tenderers are advised to read the Tender Document (including all Sections, Schedules and Annexure etc) carefully. Submission of Tender shall deem to have been done after careful study and examination of the Tender Document with full understanding.
- 1.5 Sealed tender's should be submitted to **The Director, Indian Maritime University, Visakhapatnam Campus Gandhigram, Visakhapatnam 530 005**, not later than the date and time mentioned, at the address given in this section.
- 1.6 The tender must be accompanied with Earnest Money Deposit (EMD) of **Rs.2.70 Lakhs** (Rupee Two Lakhs Seventy Thousand Only) through Demand Draft drawn on any Nationalized/Scheduled Bank favoring Indian Maritime University, Visakhapatnam Campus, payable at Visakhapatnam. Tenders without EMD will be rejected outrightly.
- 1.7 This Tender Document is not transferable.

1.8 Schedule for Invitation to Tender

1.8.1 **Name of the Purchaser**

Indian Maritime University
Visakhapatnam Campus
Gandhigram
Visakhapatnam-530005
Andhra Pradesh
Phone : 0891-2578360
Fax: 0891-2577754

1.8.2 **Location where the Equipment to be supplied**

Indian Maritime University
Visakhapatnam Campus
Gandhigram
Visakhapatnam-530005
Andhra Pradesh

1.8.3 **Addressee and Address at which Tenders are to be submitted**

Director
Indian Maritime University
Visakhapatnam Campus
Gandhigram
Visakhapatnam-530005, Andhra Pradesh

1.8.4 **Date of issue of Tender document**

From 15-01-2016 on all working days till the due date of submission of the Sealed Tender

1.8.5 **Place of issue of Tender document**

Indian Maritime University
Visakhapatnam Campus
Gandhigram
Visakhapatnam-530005, Andhra Pradesh

1.8.6 **Last date for submission of Tender**

On or Before **1500** Hours of **04-02-2016**

1.8.7 **Place of Submission of Tender (Technical and Price Bid)**

Indian Maritime University
Visakhapatnam Campus
Gandhigram
Visakhapatnam-530005, Andhra Pradesh

1.8.8 **Date of opening of Technical Bid**

At **1600** Hours on **04-02-2016**

1.8.9 **Place of opening of Technical Bid**

Indian Maritime University
Visakhapatnam Campus
Gandhigram
Visakhapatnam-530005, Andhra Pradesh

1.9 **Validity of Tender**

90 days from the last date of submission of tender

1.10 The date of opening of Price bid will be intimated to the technical qualified Tenderers after technical evaluation of the tenders.

1.11 **Date by which the supply, installation & commissioning is to be completed**

Within 8 weeks from the date of placement of Purchase order

1.12 **Pre-Bid meeting**

1.12.1 Pre-Bid meeting will be held at **1100** hours on **22-01-2016** at Indian Maritime University, Visakhapatnam Campus.

1.12.2 The bidders should submit their queries in advance and in writing on or before the pre-bid meeting.

1.12.3 The queries of the Tenderers will be discussed and suitable response will be given at the time of the pre-bid meeting.

1.12.4 Queries and IMU replies will be uploaded in the website **www.nsdr.res.in** and **www.nsdr.com** within one week from the date of pre-bid meeting.

1.12.5 It is to be noted that no queries & clarifications will be entertained after the pre-bid meeting.

1.12.6 At any time prior to the last date for receipt of the bids, IMUV may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective tenderer, modify the Tender Document by an amendment.

1.12.7 The amendment will be notified by issuing a suitable corrigendum and will be uploaded on the website **www.nsdr.res.in** / **www.nsdr.com**.

- 1.12.8 In order to afford prospective Tenderers, reasonable time in which to take the amendment into account in preparing their bids, IMUV may or at its own discretion, extend the last date for receipt of bids.
- 1.12.9 Tenderers will be allowed to survey the site with regard to Wi-Fi network, locations of CC Cameras installation with the help of IMUV representative on or before pre bid.
- 1.13 IMUV reserves right to cancel the tender without assigning any reason.

SECTION 2
DEFINITIONS

- 2.1 Tenderer: Refers to the Person or the Firm or the Company to whom this Tender is issued.
- 2.2 IMUV: Refers to Indian Maritime University, Visakhapatnam Campus.
- 2.3 Purchaser: Refers to Indian Maritime University, Visakhapatnam Campus.
- 2.4 Vendor / Contractor: Refers to the person or the firm or the Company with whom the order for the Supply of the Equipment is placed and shall be deemed to include the Vendor's/ Contractor's successors, their representatives (approved by the Purchaser), heirs, executors, administrators and permitted assigns, as the case may be, unless excluded by the terms of the Contract. Also referred to as the successful Tenderer.
- 2.5 Goods: Refers to Hardware and Softwares covered under the scope of services to be provided by the Tenderer to the Purchaser under the Contract as indicated in this Tender.
- 2.6 Services: Refers to various Services indicated in this Tender and shall include ancillary services to the supply of the Goods, transportation, insurance and any other incidental services, such as warranty for a minimum period of 3 years. Service as specified in this tender including the provision of technical assistance for integration of the supplied items and training and any other such obligations of the Tenderer as covered under the tender.
- 2.7 Items: Refers to all Goods and Services indicated in this Tender and shall include all accessories which are essential to meet the requirements specified.
- 2.8 Start Date: Refers the date on which the purchase order is placed on the successful tenderer and accepted by the successful tenderer.
- 2.9 Acceptance Date: Refers to the date on which all the items along with accessories are supplied, tested, commissioned and accepted by IMUV.
- 2.10 The Warranty period: For all supplied items the Comprehensive warranty shall be available for Three years from the date of acceptance.
- 2.11 RST, RSP: RST refers to Response Sheet Technical (RST) and RSP refers to Response Sheet Price (RSP)

- 2.12 Buyback : Refers to some of the existing servers listed in Annexure 1 (RST-06), that items, IMUV desires to give away to successful tenderer at a competitive price offered by the tenderer.
- 2.13 Bid & Bidder:
Bid Refers to an offer to supply / installation / commissioning of hardware and software under the scope of this tender.

Bidder Refers to the person or firm who competes in open tender to get the opportunity to supply / install and commission hardware and software, and provide services under the scope of this tender.

SECTION 3
GENERAL CONDITIONS AND DIRECTIONS

- 3.1 Tenders shall be submitted in accordance with the Schedule of Minimum Requirements given in **Section - 4** in this tender and as per the general conditions and directions in this section.
- 3.2 Annexure – 1 “Technical Bid” and Annexure – 2 “ Price Bid” are to be filled, sealed and are to be placed in the main cover also to be Sealed. The main cover has to be Superscribed as “Tender for Upgradation of computer hardware and software”.
Cover containing Annexure – 1 to be superscribed as “Technical Bid” and cover containing Annexure – 2 to be superscribed as “ Price Bid”.
- 3.3 On the date of opening the Tender, the Main cover and Annexure-1 (Technical Bid) will be opened in the presence of Tenderers or their authorized representatives, The authorised representatives should submit the authorization letter or else, will not be allowed to participate for the bid opening.
- 3.4 The Tenderer should enclose the full details of the items offered with full documentation, descriptive literature/leaflets supplementing the description to meet the specifications as indicated in the tender. Models and Brands offered shall be clearly indicated including all accessories. All documentation required is to be in English Language. The Tenderer shall clearly indicate Original Equipment Manufacturer (OEM) part / identification numbers for all the Hardware, Software and services supplied inclusive of warranty part number.
- 3.5 The tender shall offer and quote for all the items indicated in the tender and in the bill of materials as indicated in annexure 1. In case the tenderer do not quote any item or if the tender is incomplete the tender shall be summarily rejected. The tenderers are advised to quote for any accessories/material/ labour which is not specified in the tender to accomplish the intended purpose.
- 3.6 The Tenderer should quote for all items listed as buyback items indicated in **RST-6**. In case the tenderer do not quote all the buyback items such Tender shall be summarily rejected.
- 3.7 The Tenderer shall sign and stamp/seal on all pages of the tender documents which shall be submitted along with the technical bid. Only a person, holding a power of attorney authorizing him to do so, shall make such signature. The letter of authorization is to be enclosed along with the covering letter of the technical and price bids.
- 3.8 The EMD should be enclosed to the Technical Bid and should not be sent separately.

- 3.9 The Earnest Money Deposit of the unsuccessful Tenderer will be refunded without any interest after issue of Letter of Intent (LOI) on the successful Tenderer.
- 3.10 All the taxes and duties, etc., applicable shall be indicated clearly in the bid.
- 3.11 The offers that contain the prices in the technical bid will be invalid and such Tenders will be summarily rejected.
- 3.12 The prices quoted should be in Indian Rupees only and should include freight, forwarding, Insurance coverage till delivery and acceptance at IMUV, along with applicable taxes and duties. The taxes and duties, if any, shall be indicated clearly in the Tender and the same shall be taken into account to arrive at the total price. IMUV does not bind itself to accept claims for extra payment for items which are required to make the system functional and not included in the Tender or in the bid submitted by the tenderer. Any revision in Statutory levies during the period between placement of Letter of intent and successful commissioning of the equipment would be paid by IMUV on receiving documentary evidence for such revisions against the information furnished in the Tender.
- 3.13 The Tenderer shall abide by the specifications and terms and conditions as mentioned in this tender.
- 3.14 Specifications given in the tender are minimum required. The tenderers may offer products with higher specifications.
- 3.15 EMD of the Tenderer would be forfeited if –
- 3.15.1 The tenderer is not willing to abide by the terms of conditions after submission of tender.
- 3.15.2 The tenderer does not honour the clarifications provided to by IMUV.
- 3.15.3 The tenderer withdraws or amends or impairs or derogates from the tender in any respect within the period of validity of its tender before receipt of final acceptance.
- 3.15.4 The tenderer fails to submit Bank Guarantee as indicated in this tender within the stipulated time. (This is applicable to tenderer whose tender has been accepted)
- 3.16 Tenders will be opened on the date and time as indicated in this document. Eligible Tenderer as above should send letter of authorization

with attested specimen signature of their representative who are deputed to attend at the time of opening of Tenders. Representative without such authorization letters may not be permitted to be present to witness the opening. Only one person is authorized to attend on behalf of each Tenderer for Bid Opening.

3.17 Offers received through Fax/E-Mail will be treated as defective, invalid and rejected.

3.18 Only detailed complete offers received prior to closing time and date of the Tenders will be taken as valid.

3.19 **Eligibility Criteria for Tenderers**

3.19.1 The Tenderer should be a registered Firm in India and should be registered under the CST and/or have the sales tax registration in the state where the firm has its registered office or a statutory body by the Central/State Government.

3.19.2 Tenderer should have executed a single order of value of Rupees one crore consisting of a combination of Servers / switches / UTM / storage devices / Wi-Fi networking including supply, installation and commissioning in every year for the last Three consecutive years (2012-13, 2013-14 & 2014-15) in India. Out of these at least one work order should consist of migration of data from existing setup to new setup **(RST-02)**

3.19.3 The Tenderer should have annual turnover of Rupees Ten crores in each of the last three Financial Years (2012-2013, 2013-2014 and 2014-2015). Copies of Audited Balance Sheet and Profit and Loss Account for the last three Financial Years (2012-2013, 2013-2014 and 2014-2015) should be attached with the technical bid of the tender **(RST - 04)**

3.19.4 The tenderer should submit tender specific OEM authorisation for sales & after sales service for Servers, Switches, Wi-Fi components and UTM with documentary evidence along with technical bid.

3.19.5 The tenderer should have an office preferably in Visakhapatnam with operational help desk facility for call logging, assigning/allocation of necessary resources and escalation etc., or otherwise tenderer should make it possible to attend the issue in the same day but not later than next day.

3.19.6 Tenderer must provide letters indicating this tender reference from respective OEM that the offered solution is certified and compatible, and support will be available with spare parts and accessories for minimum of 5 years from tender date.

3.19.7 Tenderer should have ISO 20000-1:2011 compliance certificate.

3.19.8 Tenderer has to give statement of compliance to the specifications.
(RST-05)

3.20 Placement of Order:

3.20.1 After technical evaluation of the tenders, the price bid of the technically qualified tenders will be opened.

3.20.2 The lowest (L1) price quoted tender will be finalised and IMUV shall place the letter of intent (LOI) on that tenderer.

3.20.3 The L1 Price will be determined on the basis of the difference between the supply & buyback items as a whole. (Supplied items total cost – buyback items total cost = Tenderer's offer price for comparison)

3.20.4 Successful tenderer should submit 10% of the quoted value as Bank Guarantee towards security deposit, as per proforma given by IMUV within five clear working days from receiving the LOI.

3.20.5 The Bank Guarantee remains valid for a period of Three Years and 60 days beyond the date of completion of all obligation of the Supplier including warranty obligations from the date of issue of LOI, there after it shall be refunded on request without any interest.

3.20.6 After receiving the BG, IMUV will place purchase order on successful tenderer. The tenderer should send a signed acceptance copy to IMUV. The purchase order date is treated as project start date. From that date the project should be completed in all respect within 8 weeks.

3.21 Liquidated damages (LD)

3.21.1 IMUV has right to impose LD clause in case of delay in completion of the project.

3.21.2 In case of delay due to unforeseen events, the successful tenderer should submit to IMUV in writing giving notice for the delay in advance giving reasons thereof. IMUV has the right to accept or reject the request.

3.21.3 In case the successful tenderer could not complete the project within 8 weeks from the date of issuing the purchase order excluding the permissible delay as indicated in 3.21.2 above, 1% of order value will be imposed as LD charges on weekly basis for every week till the completion of the project.

3.21.4 LD amount will be deducted in the final settlement bill.

3.21.5 IMUV will reserve right to cancel the purchase order and invoke the BG If the project is not completed within 12 weeks from the project start date excluding permissible delays as indicated in 3.21.2 above.

3.22 **Terms of Payment**

3.22.1 50% of the Order value shall be paid after delivery of all the items at site and inspection

3.22.2 Balance 50% shall be paid after Installation, Commissioning, Integration, migration of data, acceptance after deductions as applicable.

3.22.3 No Advance payment will be given

SECTION-4
SCHEDULE OF MINIMUM REQUIREMENTS

4.1 Scope of the Tender:

- 4.1.1** Supply, Installation, and Commissioning of items as per bill of material given in the Annexure -1 (Technical Bid)
- 4.1.2** Providing comprehensive warranty for three years for all the bill of material under the scope of supply.
- 4.1.3** The successful tender should integrate, configure and fine tune the entire setup, and migrate present running domain controller (Microsoftserver operating system 2003 SAM database) to Microsoft data center 2012, along with all objects, group policies,application softwares, and any other such softwares to new setup.
- 4.1.4** Sections 4.2 & 4.3 gives the description of the existing setup and Section 4.4 gives the proposed system. The schedule of minimum requirements are given in the bill of materials (annexure1) along with specifications. The tenderers are advised to quote for any accessories/material/labour which is not specified in the tender to accomplish the intended purpose.

4.2 Existing setup

Server rack : Number of rack servers in use and role of each server, make model & OS

Sl. NO	Make /Model	Role and Usage
1	HP ProLiant DL380 G8 Server (2U Rack Mountable)	Installed Windows 2008 R2 Standard 64-Bit Operating System. Role: Installed HYPER-V for VMs
		I. DMZ DNS Zone- Installed Windows 2003 Standard Role: NSDRC Website (nsdrc.res.in), DNS DMZ Zone.
		II. Exchange Server- We are using Microsoft 2007 Exchange Server with windows 2003 enterprise edition operating system.
		III. Tally Server- Installed Windows 2008 Standard Software's: Tally 9, Saral Pack Payrole
		IV. Matlab Server- Installed Windows 2003 Standard

Sl. NO	Make /Model	Role and Usage
		Software's: Matlab 13B
		V. Ship flow Server - Installed Windows 7 Pro 64bit Software's: Shiplow 5.1, Altair 12.0
		VI. Ansys Server - Installed Windows 2003 Standard Software's: Ansys 10.34
		VII. Star CCM Server - Installed Windows 2008 Standard Software's: Star CCM
		VIII. Database Server -Installed Windows 2003 Standard. Software's: Oracle Database 10g for Libsys, Foran 6.3, Web.
		IX. Intranet Server - Installed Windows 2008 Standard. Roles: Installed IMUV portal for intranet and Students Attendance Management
		X. Symantec Antivirus Server - Installed Windows 2003 Standard Operating System. Software's: Symantec End Point Protection v12.0.1 with SQL Database
2	NetApp SAN Storage model:E2700 (2U Rack Mountable)	We are using NetApp SAN Storage with 1.2TB*12 Hard Disk Capacity for storing and access the data through shared network drives. This storage connected to two physical servers are connected by HBA Cards (NetApp HIC E2700 16GB FC) through fibre channel for multipathing.
3	HP ProLiant DL180 G5 Server (2U Rack Mountable)	Installed Windows 2008 Standard 64-Bit Operating System. Software's : Foran 7.2 with Hardware Token, Oracle 11G Database (Foran 7.2), Fine marine
4	HP ProLiant DL580 G7 Server (4U Rack Mountable)	Installed Windows 2008 R2 Standard 64-Bit Operating System. Software's : Yosemite Barracuda Backup Software
5	HP Ultrium 3000 LTO-5 Tape Drive	Connected to HP ProLiant DL580 G7 Server for taking Backup of all shared drives through using Yosemite Barracuda Backup

Sl. NO	Make /Model	Role and Usage
		Software
6	D-Link DVM-4K	4 Port KVM Switch used to connect HP ProLiant DL580 G7 Server and HP ProLiant DL180 G5 Server

Tower Servers: Number of Tower servers in use and role of each server, make model & OS

Sl. NO	Make /Model	Role and Usage
1	HP ProLiant ML 350 G5 Server	DOMAIN CONTROLLER with Windows 2003 Enterprise R2 32 bit Operating System. Note:Active Directory consists of several users and objects with different group policies.
2	HP ProLiant ML 350 G5 Server	Additional DOMAIN CONTROLLER with Windows 2003 Standard R2 32 bit Operating System. Softwares: Bentley Maxsurf software with Hardware Token.
3	HP ProLiant ML 350 G5 Server	Using Libsys Software with windows 2003 Standard SP2 Operating System.
4	HP ProLiant ML 350 G6 Server	Using Tribon and Aveva Software with Hardware Token on windows 2003 Enterprise R2 Operating System .

Network Devices : Number of Network Devices in the Network Rack

Sl.NO	Make & Model	Role and Usage
1	Cisco 1841 Router	We are connected the BSNL 100 Mbps WAN interface to Cisco 1841 Router and routed to public network.
2	Cisco ASA 5510 Firewall	We are using Cisco 5510 Firewall for controlling inbound and outbound network traffic.
3	Cisco 3750-G Switch –L3	We are using Cisco 3750 Switch as a core switch for connecting all server lan ports to this end and configured all VLAN's.
4	D-Link DGS-1016D	We are using this Switch to connect

SI.NO	Make & Model	Role and Usage
		DMZ DNS from Firewall directly.
5	HP A5500 Series Switch - L3	We are using this Switch for connecting all the lan ports in the IT & Server Room.
6	Cisco 2960-G Switch –L2	We are using this switch for connecting all the Design Hall Lan Ports.
7	Redundant Power System 2300 C3K-PWR-750WAC	We are using this as a Redundant Power Supply for Cisco 3750 Switch.
8	Ruckus Zone Director ZD-1100	We are using this as a Wifi Controller for Ruckus Access Points.

4.3 Wi-Fi Network:

The successful tenderer shall remove the existing Wi-Fi equipment from hostels and install the same in the main building at identified locations. Tenderer can survey the locations at the time of pre-bid meeting.

4.4 Proposed System:

4.4.1 The successful tenderer should take up migration, configuration, integration and fine tuning of the scope of supply items indicated in this tender with the existing Hardware / Software at IMU Visakhapatnam campus.

4.4.2 List of servers to be fixed in the server rack.

SI.NO	Make & Model	Roles & Usage
1	Proposed High End Server-01 (new)	Install Windows 2012 Data Centre Edition 64-Bit Operating System. Role: Install HYPER-V for VMs and create cluster between two high end servers
		I. DMZ DNS Zone - Proposed to Migrate to Windows Server 2012 Data Center Role: NSDRC Website (nsdrc.res.in), new website (IMUV.edu.in) DMZ Zone with multiple domains.
		II. Exchange Server - Migrate to Windows 2013 Exchange Server on virtual windows 2012 Data Centre Edition Operating System. a) Install and configure the Microsoft Exchange Server with a new Domain (IMUV.edu.in), and should create the new mailbox for the users.

SI.NO	Make & Model	Roles & Usage
		b) Re-directing the user mails from old domain to new domain mailbox.
		III. Tally Server - Install the Existing VM (Windows 2008 Standard Software's: Tally 9, Saral Pack Payrole) in the new Proposed.
		IV. Matlab Server - Proposed to Migrate to Windows Server 2012 Data Center.
		V. Shipflow Server - Install the existing VM (Windows 7 Pro 64bit Software's: Ship flow 5.1, Altair 12.0) in the new proposed.
2	Proposed High End Server-02 (new)	Install Windows 2012 Data Centre Edition 64-Bit Operating System. Role: Install HYPER-V for VM's
		I. Libsys Software Proposed to convert to VM with Windows Server 2012 Data Centre Edition Operating System
		II. Ansys Server - Proposed to Migrate the existing software with Windows Server 2012 Data Centre Edition Operating System.
		III. Star CCM Server - Proposed to install the software with Windows 2008 Standard.
		IV. Database Server - Proposed to Migrate to Windows Server 2012 Data Center
		V. Intranet Server - Install the existing VM (Windows 2012 Standard O.S in the new proposed.
		VI. Symantec Antivirus Server - Proposed to Migrate to Windows Server 2012 Data Center.
3	New Proposed Low End Server (new)	Proposed to Install the Windows 2012 Standard Operating System I. Add Roles & Features: 1) Install and configuration of Active Directory Service 2) Install and configuration of DNS SERVICE II. Assigning FSMO Roles 1) Creating IMUV.edu.in Domain 2) Creating Users and Computer Objects 3) Creating Group Policy Objects 4) Assigning Group Policy Objects to the concern OU's 5) Creating Batch files and assigning to concern OU's
4	NetApp SAN	The Existing Network shared drives is

SI.NO	Make & Model	Roles & Usage
	Storage(existing)	proposed to mapped to the new proposed High End clustered servers. It was proposed to procure 12 nos of 1.2 TB HDDs for IMUV future requirements. Contractor is expected to install the HDDs and configure.
5	HP ProLiant DL380 G8 Server (existing)	Proposed to the install the Foran 7.2 with Hardware Token, Oracle 11G Database (Foran 7.2), and Fine marine in the existing Windows 2008 Standard Edition Operating System.
6	HP ProLiant DL580 G7 Server (existing)	Install Bentley Maxsurf Software (Hardware Token) in this physical Server with Windows Server 2008 Standard Edition Operating System.
7	New Proposed 8 Port KVM Switch and Monitor (new)	Proposed to connect all the servers by this 8 port KVM Switch.
8	HP LTO-5 Tape Drive (existing)	Proposed to connect this tape drive to the existing HP ProLiant DL580 G7 Server.

4.4.3 List of Tower servers role

SI.NO	Make & Model	Roles and Usage
1	HP ProLiant ML 350 G6 Server(existing)	Proposed to use this Tribon and Aveva Software with Hardware Token on windows 2003 Enterprise R2 Operating System only because the software will not support the upgraded Operating Systems .
2	Dell Desktop (existing)	Proposed to migrate existing domain (nsdrc.res.in)
3	Dell Desktop (existing)	Proposed to migrate existing exchange server 2007 from VM to Dell desktop

4.4.4 List of Network Devices

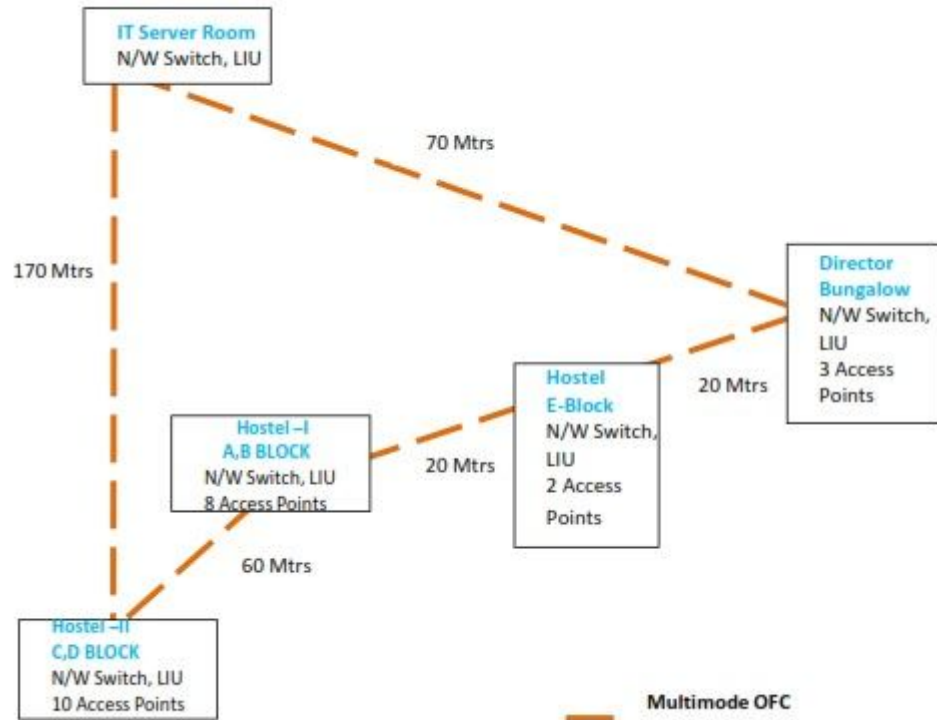
SI. NO	Make & Model	Role and Usage
1	Proposed UTM Firewall (new)	Proposed to connect the BSNL 100 Mbps WAN interface for controlling inbound and outbound network traffic. Proposed to connect a second ISP from NKN 1. NATING the private IP with Public IP.

Sl. NO	Make & Model	Role and Usage
		<p>2. Configuring the analyzer in the UTM.</p> <p>3. Creating the IP pools for setting the group policies to the internet users.</p> <p>4. Configuring the VPN network and creating the VPN Users.</p> <p>5. Configure the existing firewall settings into the new UTM Firewall.</p> <p>6. Proposed to configure the DMZ Zones for Multiple Domains.</p> <p>7. Should give the documentation & training to the IT Users</p>
2	Proposed Core Switch – L3 (new)	Proposed to Install and configure the existing Core Switch Configuration settings into the New Switches. Should configure the switches as load balancing and redundancy for server LAN Ports
3	Proposed Core Switch (Redundant) L3(new)	Proposed to Install and configure the existing Core Switch Configuration settings into the New Switches. Should configure the switches as load balancing and redundancy for server LAN Ports
4	HP A5500 Series Switch - L3 (existing)	Proposed to use this Switch for connecting all the lan ports in the IT & Server Room as earlier.
5	Cisco 3750-G Switch – L3 (existing)	Proposed to use this switch for connecting all the Design Hall Lan Ports as earlier.
6	Ruckus Zone Director ZD-1100 (existing)	We are using this as a Wifi Controller for Ruckus Access Points.

4.4.5 Proposed IP Based CC Cameras installation with NVR : 8 IP Based cameras to be installed in different locations (Library -3, Computer Lab -2, Ground Floor – 1, First floor – 1, and at Security Gate 1). NVR will be located at server room. Necessary cables supply, laying from NVR to camera locations, other accessories and software shall be provided/supported by the tenderer.

4.4.6 Proposed Wi-Fi Network : Tenderer is expected to install 23 Access points in the hostels. Location details are given below. Tenderer should supply, & lay Multimode OFC cable from server room to different hostel buildings as indicated in the line diagram. While preparing price bid tenderer should consider labor expenditure for digging, covering, laying and

relocating of the hostel's old access points to main building. Other accessories details given in the Bill of Material (Annexure-1). Tenderer should install the Wi-Fi as per the design.



Wi-Fi Locations

a. IT Server Room

- i. LIU -1 No
- ii. Multimode Transceivers – 2 Nos (Existing Switch)
- iii. Fiber Patch cords – 2 Nos

b. Hostel –II (C, D Block)

- i. SFP Switch – 1 No
- ii. Patch panel fully loaded – 1No
- iii. I/O Boxes – 10 Nos
- iv. LIU -1 No
- v. Multimode Transceivers – 2 Nos
- iv. Fiber Patch cords – 2 Nos
- v. Access points– 10 Nos

(Each quarter one Access Point)

c.Hostel –I (A,B Block)

- i. SFP Switch – 1 No
- ii. Patch panel fully loaded – 1No
- iii. I/O Boxes – 8 Nos

- iv. LIU -1 No
- v. Multimode Transceivers – 2 Nos
- vi. Fiber Patch cords – 2 Nos
- vii. Access points– 8 Nos
(Each quarter one Access Point)

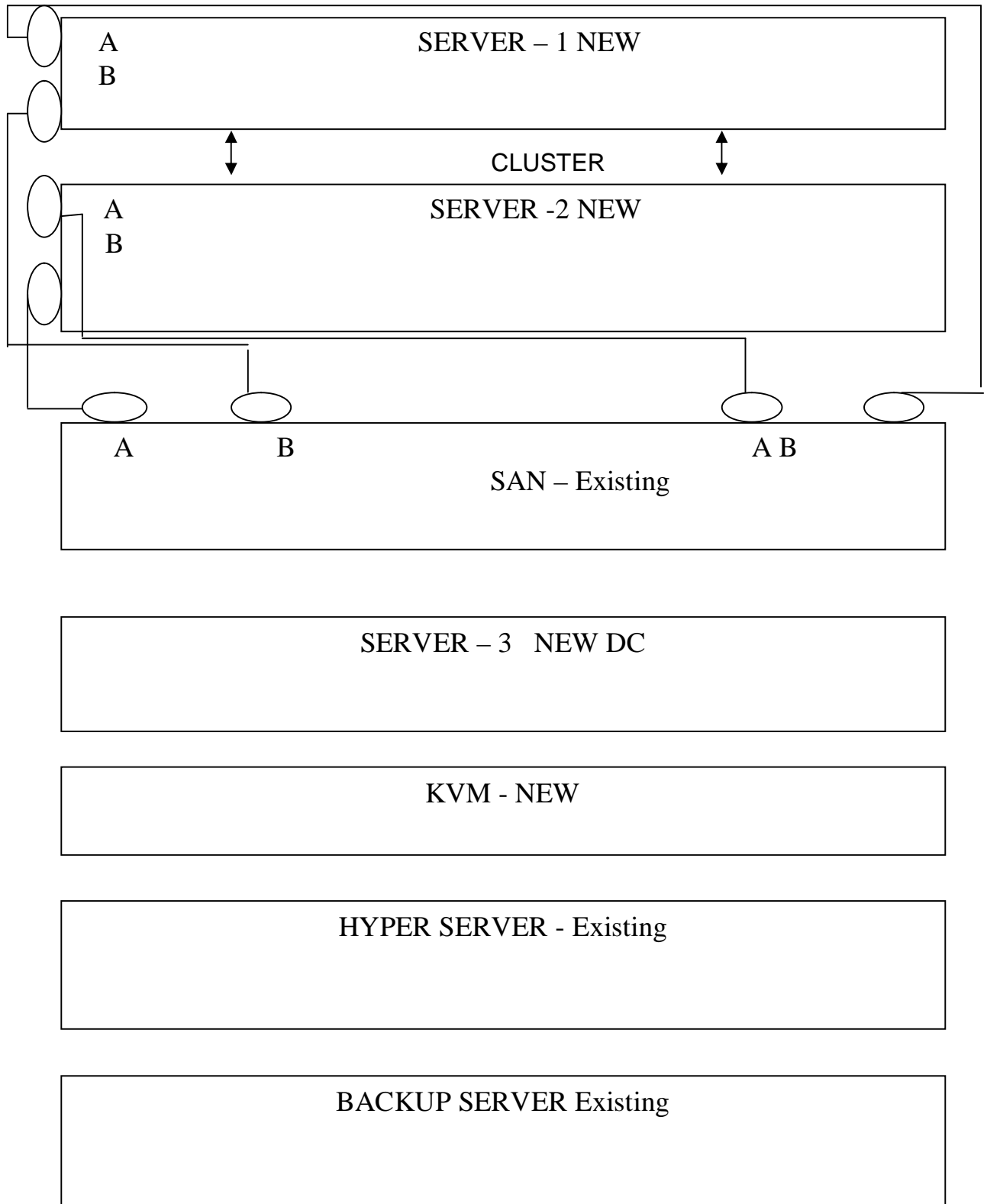
d. Hostel E-BLOCK

- i. SFP Switch – 1 No
- ii. Patch panel fully loaded – 1 No
- iii. I/O Boxes – 2 Nos
- iv. LIU -1 No
- v. Multimode Transceivers – 2 Nos
- vi. Fiber Patch cords – 2 Nos
- vii. Access points–2 Nos

e. Director Bungalow

- i. SFP Switch – 1 No
- ii. Patch panel fully loaded – 1No
- iii. I/O Boxes – 3 Nos
- iv. LIU -1 No
- v. Multimode Transceivers – 2 Nos
- vi. Fiber Patch cords – 2 Nos
- vii. Access points–3 Nos

Proposed Layout of the system :



4.5 Clients Migration:

Changing the Clients (approx.: 150 users) from Old Domain (nsdrc.res.in) to New Domain (**imuv.edu.in**) without losing any users data and settings.

4.6 Training and support:

4.6.1 The contractor shall impart training to IMUV personnel (not exceeding 5) on operation and management of the system. The training shall be imparted in a phased manner without disrupting the working of the IMUV.

4.6.2 The contractor shall make his own arrangements for supplying training material, equipment required for training etc. All training shall impart at Visakhapatnam only.

4.6.3 Training shall be given by respective OEM certified Trainers.

4.6.4 IMUV will provide necessary space and infrastructure at a free of cost for conducting the training.

4.6.5 The training provided by the contractor shall cover:

- 1) Operation of the servers, Utilities, System Administration and performance tuning along with course/reference material for each individual
- 2) Operational level training along with course/reference material for each individual
- 3) Usage, parameter settings, performance tuning, administration and disaster recovery methods of the Software including Operating System
- 4) Networking, Switching and router configuration and operations.
- 5) Internet, Intranet, Web hosting, configuring and administering Exchange Server, Web Server, setting up, and configuring UTM Device etc.,
- 6) Training on any other areas required for the optimal use of the systems.
- 7) Training on Wi-Fi network management, CC cameras and DVR management.

4.6.6 On completion of training, the contractor shall submit an evaluation report on the participants along with course details.

4.6.7 IMUV shall certify satisfactory completion of training.

4.6.8 Completion of training is a pre-requisite for acceptance of the system

4.9 Documentation:

The successful tenderer shall provide IMUV with necessary documents including the following:

4.9.1 Operational and Maintenance Manuals of configured setup

4.9.2 Equipment serial numbers and models, installed locations etc. and Licenses, Training Material for participants.

4.9.3 Full documentation on fine tuning of all the existing software, Hardware, parameter setting and integrate with the other systems and application software

4.9.4 Hardcopy of the above shall be handed over to nominated personnel of IMUV. Soft Copy of the documents shall also be provided where applicable. Submission of all original documents to IMUV by successful Tenderer is a pre-requisite for Acceptance

4.10 Acceptance/Completion:

4.10.1 The activity shall deem to have been completed with the completion of Supply, Installation, Commissioning, Integration with existing Hardware, Software & Networking Components.

4.10.2 Upon completion of work and after successful completion of other prerequisites like Acceptance testing, Training etc, as prescribed in this document. IMUV shall receive a written undertaking from the contractor that the works have been completed and accordingly a certificate of completion would be issued in respect of the works. The warranty period for the supplied system would commence from the date of Acceptance/Completion of the installation.

4.10.3 Buyback items will be handed over to successful tenderer, only after a month of Acceptance date.

4.11 Comprehensive Warranty:

4.11.1 **Warranty support services:** A comprehensive warranty for three years for the supplied items shall be provided from the date of acceptance of the system by IMUV. The contractor will be notified

of any defect or claim arising under this warranty and the warranty support shall be provided at site.

4.11.2 For the Software supplied the warranty shall include supply, installation and configuration of upgrades /fixes/patches applicable to the delivered version so as to achieve required functionality, in the Hardware provided.

4.11.3 Once the user Department/Consignee states/writes that the goods supplied are defective/not functioning properly, it must be obligatory on the part of the supplier to immediately, on the same day or by the next business day attend to it by way of rectification/repair or replacement of the goods. If after registering the complaint, the goods are not made functional for more than 7 days, IMU V reserves the right to encash the performance BG and obtain the services from any other party.

ANNEXURE-I
(TECHNICAL BID)

CONTENTS OF TECHNICAL BID

1. Covering letter should contain
 - a) Tenderer Name & Address
 - b) Bid Validity
 - c) Confirmation to all clauses of the tender
 - d) Adherence to Prices Quoted throughout the tender
2. Demand Draft towards Cost of Tender Document, in case the Tender is downloaded from the Website and Demand Draft towards Earnest Money Deposit (EMD).
3. Organization Profile **(RST-01)**
4. Eligibility Criteria
 - a) Tenderers Particulars **(RST-02)**
 - b) OEM Authorization certificate for sales and service
 - c) Annual Turnover of last three Financial Years 2012-2013, 2013-2014 and 2014-2015 **(RST-03)**
(Copies of Audited Balance Sheet and Profit and Loss Account for the last three Financial Years 2012-13, 2013-14 and 2014-15 should be attached)
 - d) List of similar Orders executed in the last three years (2012-2013, 2013-2014 and 2014-2015) **(RST-04)**
 - f) Signed Copy of the Tender Document along with pre bid minutes, amendments, clarifications if any issued prior to last day of submission of Tender
 - j) Compliance Statement to specifications **(RST-05)**
 - h) Firm registration certificate.
 - i) OEM letter for support availability with spares and accessories for minimum of 5 years from tender date.
 - k) ISO 20000-1:2011 certification should be Valid as on tender date.
5. Specifications, Brochures, Models Leaflets etc., of all the Hardware and Software supplied along with the OEM's Compliance.
6. Copy of Letter of authorization with attested specimen signature of the tenderers representative to participate in tender opening (Technical & Price). Original letter should be present at the time bid opening time.

RST - 01

RESPONSE SHEET TO TECHNICAL BID

ORGANISATION PROFILE

Indicate briefly (1 page) about the organization

Place :

Date :

Signature of the Tenderer with Seal

RST - 02

RESPONSE SHEET TO TECHNICAL BID

TENDERERS PARTICULARS FOR TENDER NO: _____

The Director
Indian Maritime University
Visakhapatnam Campus
Gandhigram
Visakhapatnam - 530005

Sir,

Being duly authorized to represent and act on behalf of _____ hereinafter called "The Tenderer" and having visited the site and examined the Scope of work, Conditions of Contract, Specifications, Schedules and Bill of Quantities for the work of "Tender for One Time up gradation of Computer Hardware and Software"

1. I / We offer to execute Order in conformity with the said Conditions of tender, Schedule of requirements, Annexure (s) to the Tender.
2. Attached to this letter are copies of Original documents defining –
 - a) The Tenderer Legal Status
 - b) The Principal Place of Business
 - c) The place of incorporation or the place of registration
 - d) Delegation of power to the signatory to the tender
3. This Tender (under Cover-I and Cover-II) is made in the full understanding that contents of Cover-I will be subject to verification of all information submitted therein along with the tender and authorise IMUV to verify the statements, documents and information submitted and to clarify the financial and technical aspects of this tender.
4. We understand that the Purchaser reserves the right to,
 - a) Amend the scope of tender
 - b) Reject or accept any tender including the lowest, cancel the tender process and reject all tender.
 - c) We agree that the Purchaser will not be liable for any such action and will be under no obligation to inform the Tenderer of the grounds for such action.
5. The bid submitted by us is valid for a period of 90 days from _____

6. Technical Support contact details

Name of the Responsible person for Technical support.	
Official Cell Phone No.	
Official Mail ID	
Official Address	

7. The undersigned declare that the statements made and the information provided in the fully completed Cover-I details are complete, true and correct in every detail.

Place :

Signature of the Tenderer with Seal

Date :

RST-03

RESPONSE SHEET TO TECHNICAL BID

ANNUAL TURNOVER

Sl. No.	Financial Year	Annual Turnover In Rupees Lakhs
1	2012-2013	
2	2013-2014	
3	2014-2015	

Note: Copies of the Audited Balance Sheet and Profit and Loss Account for the last three Financial Years 2012-13, 2013-14 and 2014-15 should be attached

Place :

Date :

Signature of the Tenderer with Seal

RST-04

RESPONSE SHEET TO TECHNICAL BID

SIMILAR ORDERS EXECUTED IN THE LAST THREE YEARS

Sl. No.	Name of the Client	Nature of Job (Enclosed Purchase Orders)	Value of Purchase Order	Date of Commencement	Date of Completion

Note: Supporting documents such as Purchase Orders/Work Orders/Contracts indicating scope of Work, items covered and value for the Years 2012-2013, 2013-2014 and 2014-2015

Place :

Date :

Signature of the Tenderer with Seal

BILL OF MATERIALS

SI No	Make	Description	Qty
1	HP or IBM or Dell	High end servers	2
2	(Recommended)	Server	1
3	Netapp	1.2TB SAN HDDs (Extended License also required)	12
4		KVM Switch (video, keyboard, and touchpad) with 8port controller	1
5		Rack Mountable Monitor for KVM Switch	1
6	FortiGate or Cyberome or SonicWALL (Recommended)	500 users license UTM with logging and reporting.	1
7	HP or CISCO or Juniper (Recommended)	L3 Switch with 2 Interface Slots and redundant power supply	2
8	Microsoft	Windows Server Datacenter 2012 R2 SNGL OLP NL Acdmc 2Proc	2
9	Microsoft	WinSvrCAL 2012 SNGL OLP NL AcdmcDvcCAL	300
10	Microsoft	ExchgSvrStd 2013 SNGL OLP NL Acdmc	1
11	Microsoft	ExchgStdCAL 2013 SNGL OLP NL AcdmcDvcCAL	100
12	Microsoft	Windows Server OS Standard 2012	4
13	Microsoft	Office 365 one license for apple MAC compatible rest is for windows	5
14		IP Based CC cameras with NVR	8
	IP Camera accessories		
14.1		1G 8 Port unmanageable Switch (autosensing 10/100/1000 ports)	4
14.2		Cat 6 UTP cable & PVC Pipe with accessories	200mtrs
14.3		Should install and commission all equipment	
15	HP or Canon or Samsung (Recommended)	A3 Ordinary Xerox scanner printers	3
16	Nitro	Nitro PRO PDF editor Latest Version (one license compatible for Apple MAC) rest all for windows	10
17	Symantec	Symantec Protection Suite ENTERPRISE EDITION 4.1 PER USER BNDL MULTI LIC GOV BAND A ESSENTIAL 12 MONTHS for Existing Part Number:4GMSOZZ0-ER1GA	50
18	Aruba or ruckus (Recommended)	Wi-Fi Network Access Points inclusive of accessories	24
19	HP or CISCO or Juniper (Recommended)	24 Port Fiber Giga bit Switches	4
20	Wi-Fi network Accessories		
20.1		12 Port LIU Fully loaded	5
20.2		1G SFP LC SX Transceiver, MM, 850nm, 550m	10
20.3		OFC Multimode	400 mtrs
20.4		HDPE Pipes 1 Inch	350mts
20.5		Cat6 UTP Cable (305 mtrs)	2 bundles
20.6		I/O Box Set	23
20.7		Cat6 UTP Patch Cords (3 mtrs)	23
20.8		Cat6 UTP Patch Cords (1 mtr)	23
20.9		Fiber Patch Cords	10
20.10		Patch Panel Fully loaded	4

Tender for up gradation of Computer Hardware and Software
Tender No IMUV/2015-2016/Admn/IT003/1 dated 15-01-2016

SI No	Make	Description	Qty
20.11		6U Racks with PD and Cable Manager	4
20.12		Electrical cabling with required accessories	4
21		Installation, Commissioning, and Migration Charges for all the supplied items inclusive of Wi-Fi accessories, labour and cc cameras accessories, labour charges etc (Lumpsum)	1

RST -05

(Specifications & Compliance)

1 High end Server (Recommended Makes - HP or IBM or Dell)

Features	Specifications	Compliance Yes/No
Form Factor	Rack Mountable	
Processor	The server should be supplied with two numbers of Intel® Xeon® E7-4800v3 or Higher	
Chipset	Chipset compatible to above processor.	
Memory	Minimum 128GB with DDR4 DIMMs required, server should support for expandability of RAM	
Integrated network controller	should have minimum 4no's of 1Gbps Onboard network adaptors	
Add-On Network Controller	Shall be supplied one 4port 1Gbps Network Card with this servers.	
Expansion Slots	Server should have minimum 4 PCI express 3.0 slots and at least two x 16 PCIe 3.0 full length full height PCI slots should be active	
Storage Controllers (RAID)	Shall be supplied with 12Gbps SAS Controller with 4GB Flash Backed Write Cache.	
	Controller should support data encryption to protect sensitive and mission critical data.	
	Controller should support RAID level 6 and Advanced Data Mirroring with 3 drives	
Storage	Server have minimum 5 bays SFF and minimum 1.5 TB storage space 10K SAS 6Gbps Hot swappable HDDs at least 5 storage bays should be free for future expansion with support for RAID level 6	
Interfaces	System should support minimum of,	
	Serial port: 1	
	Video: 1	
	USB 3.0 Ports: external minimum 4	
HBA Card Compatibility	The Server should have slots compatible with HBA Cards(X-56002-00-0E-R6-C)	
Industry standard compliance	ACPI 2.0. Compliant, PCIE 2.0 Compliant	
	PXE Support, WOL Support	
	Physical Address Extension (PAE) Support	
	Microsoft® Logo certifications, USB 3.0 Support	
Power supply	Configured with two numbers 80+ platinum or high efficiency hot plug redundant power supplies 1+1	
System fans	Configured with hot plug redundant system fans	
Remote Management	System remote management should support browser based Graphical Remote Console; Virtual Power button, Remote boot using USB / CD/ DVD Drive and should be capable to offer upgrade of software and patches from a remote client using Media / image/folder.	

Features	Specifications	Compliance Yes/No
Server Management	should support both UEFI and legacy system BIOS	
	Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD. Should support automatic event handling that allows configuring policies to notify failures via e-mail, pager, or SMS gateway or automatic execution of scripts	
	Server should support cloud based management by accessing the servers' configuration information, warranty & Service Level Agreement (SLA) information, support case details anywhere from the internet	
	Supplier should supply the server management software of the same brand with the server.	
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response (3-3-3).	

2. Server (Recommended Makes - HP or IBM or Dell)

Features	Specifications	Compliance Yes/No
Form Factor	Rack Mountable	
Processor	One Intel® Xeon® E5-2620v3 (2.4GHz/6-core/15MB/85W) Processor Kit or Higher	
Chipset	Chipset compatible to above processor.	
Memory	Minimum 16GB with DDR4 DIMMs required, server should support for expandability of RAM	
Integrated network controller	should have minimum 4no's of 1Gbps Onboard network adaptors	
Expansion Slots	Server should have minimum 3 PCI express 3.0 slots and at least two x 16 PCIe 3.0 full length full height PCI slots should be active	
Storage Controllers (RAID)	Shall be supplied with 12Gbps SAS Controller with 2GB Flash Backed Write Cache.	
	Controller should support data encryption to protect sensitive and mission critical data.	
	Controller should support RAID levels 6 and Advanced Data Mirroring with 3 drives	
Storage	Server have minimum 5 bays SFF and minimum 1.5 TB storage space 10K SAS 6Gbps Hot swappable HDDs at least 5 storage bays should be free for future expansion with support for RAID level 6	
Interfaces	System should support minimum of,	
	Serial port: 1	
	Video: 1	
	USB 3.0 Ports: external minimum 4	

Features	Specifications	Compliance Yes/No
Industry standard compliance	ACPI 2.0. Compliant, PCIE 2.0 Compliant	
	PXE Support, WOL Support	
	Physical Address Extension (PAE) Support	
	Microsoft® Logo certifications, USB 3.0 Support	
Power supply	Configured with two numbers 80+ platinum or high efficiency hot plug redundant power supplies 1+1	
System fans	Configured with hot plug redundant system fans	
Remote Management	System remote management should support browser based Graphical Remote Console; Virtual Power button, Remote boot using USB / CD/ DVD Drive and should be capable to offer upgrade of software and patches from a remote client using Media / image/folder.	
Server Management	should support both UEFI and legacy system BIOS	
	Should help provide proactive notification of actual or impending component failure alerts on critical components like CPU, Memory and HDD. Should support automatic event handling that allows configuring policies to notify failures via e-mail, pager, or SMS gateway or automatic execution of scripts	
	Server should support cloud based management by accessing the servers' configuration information, warranty & SLA information, support case details anywhere from the interne	
	Supplier should supply the server management software of the same brand with the server.	
Warranty	Server Warranty includes 3-Year Parts, 3-Year Labor, 3-Year Onsite support with next business day response.	

3. NETAPP SAN HDDS:

S.No	Specifications	Compliance Yes/No
1	NetApp SAN HDDs : 12 No's Part code: "E-X4054A-0E-R6-C(1.2 TB, 10k, fed, de 5600,oe-c)"	
2	3 Years onsite warranty	

4. 8-PORT KVM SWITCH:

Features	Specifications	Compliance Yes/No
Server Connections		
Form Factor	Rack Mountable	
Direct	8	
Port Selection	Hotkey, Pushbutton, OSD	

Features	Specifications	Compliance Yes/No
Connectors		
Console Ports	1 x SPHD-18 Male colour code	
KVM Ports	8 x SPHD-15 Female colour code	
Firmware Upgrade	1 x RJ-11 Female colour code	
Power	1 x DC Jack	
Switches		
Ports	8 x Pushbutton	
Firmware Upgrade	1 x Slide	
LEDs		
Online	8	
Selected	8	
Power	1	
Emulation		
Keyboard / Mouse	PS/2, USB	
Video	2048 x 1536; DDC2B	
Environmental		
Operating Temperature	0-50°C	
Storage Temperature	-20-60°C	
Humidity	0-80% RH, Non-condensing	
Physical Properties		
Housing	Metal	
Warranty	3 years warranty	

5. KVM MONITOR:

Features	Specifications	Compliance Yes/No
Chassis	Rack Mountable	
Connectors		
KVM Ports	1 x SPHD Female	
Power	1 x 3-prong AC Socket	
Switches		
LCD Adjustment	4 x Pushbuttons	
Reset	1 x Semi-recessed Pushbutton	
Power	1 x Rocker	
LEDs		
Power	1	
Num Lock	1	
Caps Lock	1	

Features	Specifications	Compliance Yes/No
Scroll Lock	1	
Video		
17" LCD	1280 x 1024; DDC2B	
Environment		
Operating Temp	0-40°C	
Storage Temp	-20-60°C	
Humidity	0-80% RH, Non-condensing	
Warranty	3 years warranty	

6. Unified Threat Management devise: (Recommended Makes - FortiGate or Cyberome or SonicWALL)

Features	Specifications	Compliance Yes/No
Hardware Based Unified Threat Management(UTM)	1. The UTM should be Hardware based, Reliable, purpose-built security appliance with hardened operating system that eliminates the security risks associated with general-purpose operating systems. Appliance should be 1U/2U size and rack mountable.	
	2. Appliance should have hardware/software acceleration so that processing is not slowed down by IPSEC/SSL VPN and content Inspection	
	3. UTM Appliance should have minimum 120GB space to store the firmware image and the UTM policies and Anti-Virus + IPS signatures.	
	4. Should support 6 or more gigabit interfaces with auto sensing 10/100/1000 capability, 2 USB, 4 fully loaded universal MM Transreceivers Gbe SFP Ports, 1 console port	
	5. shall have supplied with redundant power supply.	
General Technical Specification of various Modules		
A.Firewall + IPSEC VPN + SSL VPN	1. The UTM System shall comply with RFC 1918 with support for Static & Dynamic Network Address Translation and Port Address Translation.	
	2. UTM Should not have any user based licensing for UTM and VPN (IPSEC and SSL).	
	3. Should support VLAN tagging (IEEE 802.1q) in NAT/Route mode	
	4. Support for deployment of the UTM in a secure Layer 2 bridging mode, providing rich Layer 2-7 UTM security services for the protected network while remaining "invisible" to devices on each side of it.	

Features	Specifications	Compliance Yes/No
	5. UTM should have access control and deep inspection UTM services for native IPv6 network environments and mixed IPv4 and IPv6 network environments through dual-stack support.	
	6. The UTM should support static routing, Dynamic Routing (RIP, OSPF, and BGP & IS-IS) must be supported for IPv4, IPv6 Routing Protocols like RIPng, OSPFv3 and BGP4+ and policy based routing.	
	7.UTM should support for SSHv2, Telnet, HTTP and HTTPS based management.	
	8.UTM should Support for RADIUS, Active Directory & LDAP for the user authentication protocols in addition to local authentication.	
	9.UTM The HA Architecture should have the ability for Device Failure Detection and Notification as well as Link Status Monitor and should have the ability to share the load between 2 appliances in Active Active.	
	10.The UTM should have Integrated specialized inspection possible for protocols like HTTP, FTP, DNS, SNMP, ICMP, NFS, H.323, SIP, RTSP and many more.	
	11.UTM should support both SNMPv1, SNMPv2 providing in-depth visibility into the status of appliances.	
	12.UTM Should support both SNMP and email based alerts.	
	13.UTM should support extensive logging to external logging device or syslog servers and should provide a web based real time log viewing and filtering capability.	
	14.UTM should support Multiple Link load sharing/balancing.	
	15.Should support configurable policy options Possible to select traffic to scan for viruses, Should have options to prevent user downloads based on file extension as well as file type and Should be able to scan and block attachments in addition to IP address based UTM policies.	
	16.UTM should support manual content as well as URL filtering support.	
	17.UTM should identify and control applications regardless of port and protocol for at least 1000 applications and to be demonstrated by the firm during inspection and registration.	
	18.UTM should support Traffic shaping and prioritization based on Per IP address.	
	19.The product should be IPv6 ready that demonstrates readiness for IPv6 environment.	
	20.The firewall policy table shall also allow display of filtered firewall policies based of selected objects.	

Features	Specifications	Compliance Yes/No
	21.The firewall shall be able to handle VoIP traffic securely.	
	The proposed system shall comply/support industry standards, supports without additional external solution, hardware or modules such as IPSEC VPN, SSL VPN.	
	The device should support protocols such as DES & 3DES, MD5, SHA-1, SHA-256 authentication, Diffie-Hellman Group 1, Group 2, Group 5, Group 14, Internet Key Exchange (IKE) v1 as well as IKE v2 algorithm, The new encryption standard AES 128, 192 & 256	
	The system shall support IPSEC and PPTP VPN pass through so that computers or subnets on internal network can connect to a VPN gateway on the Internet.	
	The system shall support Multiple forms of site-to-site VPN configurations Like Route, Policy, Domain etc.	
	The system shall support IPSEC site-to-site VPN and remote user VPN in transparent mode.	
	The system shall support the following IPSEC VPN capabilities like Multi-zone VPN supports., IPsec, ESP security, Supports Aggressive and Dynamic mode, Hardware accelerated encryption using IPSEC, DES, 3DES, AES, Support perfect forward secrecy group 1 and group 2 configuration, MD5 or SHA1 authentication and data integrity., Automatic IKE (Internet Key Exchange) and Manual key exchange., Supports NAT traversal, Supports Extended Authentication, Supports Hub and Spoke architecture, Supports Redundant gateway architecture and DDNS support.	
	The proposed system shall support TWO modes of SSL VPN operation:1)Web-only mode: for thin remote clients equipped with a web browser only and support web application such as HTTP/HTTPS Proxy, FTP, Telnet and 2) Tunnel mode, for remote computers that run a variety of client and server applications.	
	The proposed system shall provide certificate-based authentication for administrative access to IPsec & SSL VPN.	
B. Intrusion Prevention System (IPS)	UTM should have Integrated IPS Solution.	
	Support behavior analysis and signature based analysis with online download support of newer signatures for at least 4000 and shall be demonstrated by the firm during inspection and registration.	
	There should be an option to create User-specified signatures or online signature update function with minimum -every one hour checking time.	

Features	Specifications	Compliance Yes/No
	The software on the IPS should support online software reconfiguration to ensure that changes made to a IPS configuration take place with immediate effect	
	The IPS should have high availability, so that in case if the primary fails the secondary appliance will become active without any manual intervention.	
	IPS solution should have capability to protect against Denial of Service (DOS) and DDOS attacks. Should have flexibility to configure threshold values for each of the Anomaly. DOS and DDOS protection should be applied and attacks stopped before UTM policy look-ups, AV scan.	
	IPS solution should be flexible enough to configure, enable/disable signatures and have different actions for the IPS signature at the UTM policy level and not configured at GLOBAL or interface level.	
	DOS and DDOS protection should be applied and attacks stopped before UTM policy look-ups, AV scan. Option to configure and set DOS threshold values at an IP and Subnet level should be possible.	
	IPS signatures should have a configurable actions like terminate a TCP session by issuing TCP Reset packets to each end of the connection, or silently drop traffic in addition to sending a alert and logging the incident.	
	Signatures should be with a severity level defined to it so that it helps the administrator to understand and decide which signatures to enable for what traffic (e.g. for severity level : high medium low).	
	Can export reports to other formats. Should be able to output report data into a variety of different file formats like HTML, PDF, Doc etc.	
C. Anti-Virus	UTM should have integrated gateway level Anti-Virus Solution.	
	Virus gateway should provide real-time detection of viruses and malicious code at the gateway for SMTP, iMAP/ POP3, HTTP, HTTPS and FTP Internet traffic. IM protocols (MSN, Yahoo etc). The solution should detect and block viruses in HTTPS traffic.	
	UTM Should support both Proxy based and/or flow based AV scanning Technology.	
	The proposed solution should be licensed per Hardware/Appliance as against per user.	
	Virus Gateway should have option to configure to respond to virus detection in several ways .ie. Delete the file/quarantine the file and alert e-mail.	

Features	Specifications	Compliance Yes/No
	Frequent updates of virus pattern files should be available from the Web and option for scheduling for automatic update thru a secure communication as well as for manual update should be available.	
	Should have facility to block files based on file extensions or original file type over HTTP, HTTPS, FTP, SMTP, POP3;	
	Should have facility to configure the max file/email size which can be downloaded thru internet.	
	The solution should support load balancing for the AV scanning, so that the traffic which needs to be scanned can be load balanced across the boxes in the cluster.	
	Should have reporting facility to generate reports on virus detected over different protocols, top sources for viruses, destination for viruses, top viruses etc.	
D. Anti-Spam	The proposed UTM shall have the ability to provide Anti-Spam capabilities over SMTP, POP3 without external solution, devices or hardware modules	
	Solution should have inspection facility on the header and body of the mail to check for spam URI content and identify whether the mail is a spam mail or not.	
	Option should be available to manually configure multiple RBL and/or ORDBL servers to check for spam mail.	
	Should have options to configure white list as well black list based on IP address, email address/domain and validate against the same to detect whether a mail is spam mail or not.	
	Should have provision to define banned key words and check against those key words to identify spam mails.	
	Should have configurable spam actions for detected spam mails ie. tag the mail, delete the Spam mail etc.	
E. Web & content Filtering	UTM should have integrated category based URL filtering solution which should be capable of filtering HTTP and HTTPS based URLs.	
	The proposed solution should be licensed per unit as against per user.	
	Should be able to block different categories/sites based on users for at least 20 million sites under 50 categories and same shall be demonstrated by the firm during registration and inspection.	
	Should have configurable parameters to block/allow unrated sites.	
	Should have configurable options to allow/deny access to web sites in case if the URL rating service is unavailable.	
	Should have options to customize the block message information send to end users.	

Features	Specifications	Compliance Yes/No
	Should have facility to configurable policy options to block web sites based on banned words.	
	Should have configurable policy options to block URLs based on web patterns (e.g. Mail.* to block web mail related sites)	
	Should have configurable policy options to define the URLs what needs to be blocked as well as the exempt list	
F. Application Control	The proposed system shall have the ability to detect, log and take action against network traffic based on over 1,000 application signatures.	
	The application signatures shall be manual or automatically updated.	
	The administrator shall be able to define application control list based on selectable application group and/or list and its corresponding actions.	
	The proposed system shall have the ability to identify, block or rate limit the following common P2P applications: Gnutella (Napshare, iMesh, Mldonkey, morph, Xolox, BearShare, FOXY), Bittorrent, Kaaza, WinY, edonkey.	
	The proposed system shall have the ability to manage and control Instant messaging usage by identifying various IM applications such as AIM, MSN, YAHOO, SIMPLE, ICQ.	
	Should have the option for administrators to specify access rights accordingly for IM applications like Yahoo, MSN etc.	
	Control file transfer and audio call over Skype & Yahoo!, etc	
	The proposed system shall have the ability to manage and control VoIP usage.	
G. Link Load Balancing/sharing & Router	The proposed system shall be able to operate on either Transparent (bridge) mode to minimize interruption to existing network infrastructure or NAT/Route mode.	
	The system must be able to support routing protocols including, RIPv1 & v2, OSPF, BGP-4.	
	The system shall be able to provide Wan link redundancy using ping probes.	
	UTM should support Multiple links (more than 2) load sharing / balancing with failover cum redundancy.	
H. Performance specifications :	UTM Firewall throughputs of minimum 8 Gbps or more for both 512 byte packet and 64 byte packet	
	UTM 3DES/AES IPSec VPN throughput should be 7 Gbps or more with and should be hardware accelerate.	
	Minimum concurrent firewall sessions supported shall be 600000.	

Features	Specifications	Compliance Yes/No
	Must support at least 200,000 or more new sessions per second processing.	
	Minimum Antivirus throughput shall be 1 Gbps.	
	UTM should have integrated SSL VPN gateway functionality.	
	Minimum intrusion prevention system throughput shall be 2 Gbps.	
	UTM should at least be comprised of following 7 security functionalities	
	(a) UTM + IPSec Vpn + SSL VPN	
	(b) Intrusion Prevention system	
	(c) Antivirus	
	(d) Anti-Spam	
	(e) Web Content Filtering	
	(f) Application Control	
	(g) Link Load balancing & Router.	
Management & Monitoring	Should have integrated Gateway level Client Reputation detection feature whereby client Authorization by device type independent of User, Device/User Monitoring & dynamically Control clients.	
	Firewall should support logging to multiple syslog servers and should generate reports by integrating with other solutions. Reporting should not be done on firewall appliance as it would degrade the firewall security performance.	
	The reporting tool needs to be bundled or quoted along with the solution. The logging and analysis should either be an appliance or on a dedicated PC/ Server platform. The bidder should take the responsibility of supplying the hardware and the OS with suitable warranty.	
	The solution should provide comprehensive security event logging, reporting & correlation with digital forensics i.e lawful interception & archiving of interesting popular protocol traffic such as SMTP, HTTP, POP3, IMAP, FTP, IM, NNTP etc for regulatory compliances & analysis purpose.	
Hardware based Reporting and Logging Solution	The logging reporting solution should preferably hardware appliance based, If not then it should be a software based solution quoted with recommended hardware and solution should support minimum 50 UTM appliances.	
	Should have secure connectivity between UTM appliances and log analysis appliance, It should have at least two 10/100/1000 ports	
	The solution should generate the reports for the UTM, IPS, AV, web content filtering, VPN, application control etc.	

Features	Specifications	Compliance Yes/No
	The solution shall have readymade templates to generate reports like complete reports or attack reports, bandwidth report, intranet report, web filtering report.	
	The solution should help to analyze/understand Attacks over various protocols like http, ftp, SMTP, POP3 and IMAP as well as to sources and destination for these attacks.	
	The solution should help to analyze/understand the protocol and bandwidth usage by users to help in capacity planning and understand network utilization.	
	Should have options to generate reports in different formats like html, pdf, MS word etc.	
	The solution should have configurable options to send the reports as a mail to the designated email address or to ftp to the configured ftp location.	
	Should have configurable parameters to set alert thresholds (eg. If same event/ attack occurs more than 5 times within an hour time).	
	The solution should have configurable options to schedule the report generation (e.g. hourly, daily, weekly etc.).	
	The solution should be running its own syslog server to collect the logs.	
	Should have options to create users with different access rights (e.g.. users who can only view reports, users who can create schedules and reports etc)	
	The licensing for the solution should be per device.	
	Solution should have at least 1TB storage space for logs & Reports.	
3.GUARANTEE/WARRANTY CLAUSE:	The below Warranty shall be offered directly from the OEM.	
	3 Years warranty with advance replacement and next-business-day delivery	

7. L3 SWITCHES (Recommended Makes - HP or CISCO or Juniper)

<u>Sl. No</u>	<u>Specifications</u>	<u>Compliance Yes / No</u>
<u>1</u>	<u>Architecture</u>	
1.1	Rack Mountable	
1.2	Dual, hot-swappable power supplies required	
1.4	24 RJ-45 autosensing 10/100/1000 ports + additional 4 fixed Gigabit Ethernet SFP ports.	
1.5	Two 10-Gigabit ports (SFP+/XFP) required	
1.6	1 RJ-45 serial console port	
1.7	1 RJ-45 out-of-band management port	
1.8	1GB SDRAM and 512 MB flash or Higher	
1.9	Switching capacity of 176 Gbps or Higher	
1.10	Switching throughput up to 130 million pps	
1.11	DAC 10g Staking cable one 1mtr 10G	
<u>2</u>	<u>Resiliency</u>	
2.1	Shall have the capability to extend the control plane across multiple active switches making it a virtual switching fabric, enabling interconnected switches to perform as single Layer-2 switch and Layer-3 router	
2.3	The modules/cables to create virtual switching fabric is required	
2.4	IEEE 802.1D Spanning Tree Protocol, IEEE 802.1w Rapid Spanning Tree Protocol and IEEE 802.1s Multiple Spanning Tree Protocol (STP port configuration)	
2.5	IEEE 802.3ad Link Aggregation Control Protocol (LACP)	
2.6	Ring protocol support to provide sub-100 ms recovery for ring Ethernet-based topology	
2.7	Virtual Router Redundancy Protocol (VRRP) to allow a group of routers to dynamically back each other up to create highly available routed environments	
2.8	Graceful restart for OSPF, IS-IS and BGP protocols	
2.9	Bidirectional Forwarding Detection (BFD) for OSPF, IS-IS and BGP protocols	
<u>3</u>	<u>Layer 2 Features</u>	
3.1	IEEE 802.1Q-based VLANs up to 4,000 port or	
3.2	GARP VLAN Registration Protocol or equivalent feature to allow automatic learning and dynamic assignment of VLANs	
3.3	Should monitor link connectivity and shut down ports at both ends if uni-directional traffic is detected, preventing loops	
3.4	Should have IEEE 802.1ad QinQ and Selective QinQ to increase the scalability of an Ethernet network by providing a hierarchical structure	
3.5	Should have Jumbo frames on GbE and 10-GbE ports	
3.6	Internet Group Management Protocol (IGMP)	
3.7	Multicast Listener Discovery (MLD) snooping	
3.8	IEEE 802.1AB Link Layer Discovery Protocol (LLDP)	

<u>Sl. No</u>	<u>Specifications</u>	<u>Compliance Yes / No</u>
3.9	Multicast VLAN to allow multiple VLANs to receive the same IPv4 or IPv6 multicast traffic	
4	<u>Layer 3 Features (any additional licenses required shall be included)</u>	
4.1	Static Routing for IPv4 and IPv6	
4.2	RIP for IPv4 (RIPv1/v2) and IPv6 (RIPng)	
4.3	OSPF for IPv4 (OSPFv2) and IPv6 (OSPFv3)	
4.4	IS-IS for IPv4 and IPv6 (IS-ISv6)	
4.5	Border Gateway Protocol 4 with support for IPv6 addressing	
4.6	Policy-based routing	
4.7	Unicast Reverse Path Forwarding (uRPF)	
4.8	IPv6 tunneling to allow IPv6 packets to traverse IPv4-only networks by encapsulating the IPv6 packet into a standard IPv4 packet	
4.9	Dynamic Host Configuration Protocol (DHCP) client, Relay and server	
4.10	PIM Dense Mode (PIM-DM), Sparse Mode (PIM-SM), and Source-Specific Mode (PIM-SSM) for IPv4 and IPv6 multicast applications	
4.11	MPLS capability including MPLS VPNs and MPLS Traffic Engineering (MPLS TE)	
4.12	VPLS for data center to data center communication at Layer 2; provides support of hierarchical VPLS for scalability	
4.13	provide support of hierarchical VPLS (H-VPLS) for scalability	
5	<u>QoS and Security Features</u>	
5.1	Access Control Lists for both IPv4 and IPv6 for filtering traffic to prevent unauthorized users from accessing the network	
5.2	Port-based rate limiting and access control list (ACL) based rate limiting	
5.3	Congestion avoidance using Weighted Random Early Detection (WRED)	
5.4	Powerful QoS feature supporting strict priority (SP) queuing, weighted round robin (WRR), weighted fair queuing (WFQ), weighted deficit round robin (WDRR) and weighted random early discard (WRED)	
5.5	IEEE 802.1x to provide port-based user authentication with multiple 802.1x authentication sessions per port	
5.6	Media access control (MAC) authentication to provide simple authentication based on a user's MAC address	
5.7	Dynamic Host Configuration Protocol (DHCP) snooping to prevent unauthorized DHCP servers	
5.8	Port security and port isolation	
6	<u>Management Features</u>	
6.1	Configuration through the CLI, console, Telnet, SSH and Web Management	
6.2	SNMPv1, v2, and v3 and Remote monitoring (RMON) support	
6.3	sFlow (RFC 3176) or equivalent for traffic analysis	

<u>Sl. No</u>	<u>Specifications</u>	<u>Compliance Yes / No</u>
6.4	Management security through multiple privilege levels with password protection	
6.5	FTP, TFTP, and SFTP support	
6.6	Port mirroring to duplicate port traffic (ingress and egress) to a local or remote monitoring port. Shall support minimum four mirroring groups	
6.7	RADIUS/TACACS+ for switch security access administration	
6.8	Network Time Protocol (NTP) or equivalent support	
6.9	Shall have Ethernet OAM (IEEE 802.3ah) management capability	
<u>7</u>	<u>Environmental Features</u>	
7.2	Shall be capable of supporting both AC and DC Power inputs	
7.3	Operating temperature of 0°C to 45°C	
7.4	Safety and Emission standards including UL 60950-1; IEC 60950-1; VCCI Class A; EN 55022 Class A	
<u>8</u>	<u>Warranty and Support</u>	
	The below Warranty shall be offered directly from the switch OEM.	
8.1	3 Years warranty with advance replacement and next-business-day delivery	

8. IP BASED CCTV CAMERAS with NVR:

Feature	Specification	Compliance Yes / No
Indoor Camera-7 No's		
Image Sensor	1/3" Progressive Scan CMOS	
Minimum Illumination	0.01Lux @ (F1.2, AGC ON) ,0 Lux with IR	
Shutter Speed	1/25(1/30) s to 1/100,000 s	
Lens	4mm@ F2.0, Angle of view: 73.1°	
Video Compression	H.264/ MJPEG	
H.264 Type	BaseLine Profile/Main Profile	
Video Bit Rate	32Kbps~8Mbps	
Dual Stream	Yes	
Resolution	1280 x 960	
Frame Rate	50 Hz □ 25 fps (1280 × 960) □ 25 fps (1280 x 720), 25 fps (704 x 576), 25 fps (640 x 480) 60 Hz □ 30 fps (1280 × 960) □ 30 fps (1280 x 720), 30 fps (704 x 576), 30 fps (640 x 480)	
Image Settings	Rotate mode, Saturation, Brightness, Contrast adjustable by client software or web browser	
Security	User Authentication, Watermark	
Alarm Trigger	Motion detection, Dynamic analysis, Tampering alarm	
Protocols	TCP/IP,ICMP,HTTP,HTTPS,FTP,DHCP,DNS,DDNS,RTP,RTSP,RTCP, PPPoE,NTP,UPnP,SMTP,SNMP,IGMP, 802.1X,QoS,IPv6,Bonjour	
IR Range	30 meters	
Operating Temperature	-30 °C – +60 °C Humidity 95% or less (non-condensing)	
Power Source	12 V DC ± 10% , PoE (802.3af)	
Weatherproof Standard	IP66	
Network	1 RJ45 10M/100M Ethernet interface	
Warranty	3 Years onsite warranty	
Outdoor Bullet Camera-1 No's		
Image Sensor	1/3" progressive scan CMOS	
Minimum Illumination	0.01 lux @F1.2, AGC ON 0 lux with IR	
Shutter Speed	1/25s ~ 1/100,000s	

Feature	Specification	Compliance Yes / No
Lens	6mm @F1.2	
Day & night	IR cut filter with auto switch	
Video compression	H.264 / MPEG4 / MJPEG	
Bit rate	32 Kbps ~ 16 Mbps	
Image Resolution	1280 × 960	
Frame rate	50Hz: 25fps (1280 × 960), 25fps (1280 x 720) 60Hz: 30fps (1280 × 960), 30fps (1280 x 720)	
Image settings	Saturation, brightness, contrast adjustable through client software or web browser	
Alarm trigger	motion detection, tampering alarm, network disconnect, IP address conflict, storage exception	
Protocols	TCP/IP, HTTP, DHCP, DNS, DDNS, RTP, RTSP, PPPoE, SMTP, NTP, SNMP, HTTPS, FTP, 802.1x, Qos (SIP, SRTP, IPv6 optional)	
Interoperability	ONVIF, PSIA, CGI	
Security	User Authentication, watermark	
Communication interface	1 RJ45 10 M / 100 M Ethernet interface	
Weather proof rating	IP66	
IR	Approx. 20 ~ 30 meters	
Operating Temperature	-10 °C ~ 60 °C humidity 90% or less (non-condensing)	
Power supply	12 VDC ± 10% , PoE (802.3af)	
Warranty	3 Years onsite warranty	
NVR		
IP video input	8-channel	
Two-way audio input	1-ch, RCA (2.0 Vp-p, 1kΩ)	
Incoming bandwidth	50Mbps	
Outgoing bandwidth	80Mbps	
Remote connection	128	
Recording resolution	5MP/3MP/1080P/UXGA/720P/VGA/4CIF/DCIF/2CIF/CIF/QCIF	
Frame rate	Main stream: 50 fps (P) / 60 fps (N)	

Feature	Specification	Compliance Yes / No
	Sub-stream: 50 fps (P) / 60 fps (N)	
HDMI/VGA output	1-ch, resolution: 1920 × 1080P /60Hz, 1600 × 1200 /60Hz, 1280 × 1024 /60Hz, 1280 × 720 /60Hz, 1024 × 768 /60Hz	
Audio output	1-ch, RCA (Linear, 1kΩ)	
Live view / Playback resolution	5MP/3MP/1080p/UXGA/720p/VGA/4C IF/DCIF/2CIF/CIF/QCIF	
Capability	8-ch@720P, 6-ch@1080P	
SATA	2 SATA interface for 2 HDDs	
Capacity	Up to 4TB for each disk	
HDD	2TB Capacity should supply with NVRNVR (Seagate or WD)	
Network interface	1 RJ-45 10 /100 /1000 Mbps self-adaptive Ethernet interface	
USB interface	1 × USB 2.0 and 1 × USB 3.0	
Alarm in/out	4 / 1	
Interface	8 independent 100 Mbps PoE network interfaces	
Supported standard	Supported standard	
Power supply	220V AC	
Working temperature	-10 °C ~ +55 °C	
Chassis	19-inch rack-mounted 1U chassis	
Warranty	3 Years onsite warranty	
Un-Managed Switch	1G 8port autosensing 10/100/1000 Switch	
Cable	CAT 6 cable with PVC pipe and accessories - 200 mtrs approximately	
	Should install and commission all equipment	
Warranty	3 Years onsite warranty	

9. A3 MULTIFUNCTION PRINTER: (Recommended Makes HP or Canon or Samsung)

Features	Specifications	Compliance Yes / No
Print Technology:	Laser	
Functions:	Print, Copy, Scan, Fax	
Black/Color Printer:	Black	
Duty cycle (monthly, A4):	Up to 200,000 pages	
Print Speed:	Up to 41 ppm	
Duplex Print:	Automatic	
Paper size supported:	A3, A4, A5	
Copy Speed:	Up to 41 cpm	
Scan Resolution (Optical):	Up to 600 dpi	
Internal Memory:	1 GB	
USB support:	Hi-Speed USB2.0	
Ethernet LAN (RJ45):	10/100/1000 Gigabit	
Black Cartridge:	Yes	
LCD Display:	LCD Touchscreen	
Warranty	3 Years onsite warranty	

10. Wi-Fi Indoor Access Points (Recommended Makes : Aruba or Ruckus)

Features	Specifications	Compliance Yes / No
Major Feature	Description	
Architecture	WLAN Controller should be hardware/appliance-based controller OR software-based controller in which APs acts as a virtual controller.	
Scalability	In case of hardware controller, controller shall be capable of supporting minimum of 150 AP's from day one for future scalability. In case of software-based controller, centralized management solution also shall be provided to manage software controllers.	
Centralized Management	NMS shall be provided to manage hardware/virtual controllers.	
High Availability	High availability should be provided for controllers. In the event of a failure of the hardware/virtual controller, a standby controller shall automatically take over the master role.	
WLAN Features	Should support Band Steering feature that forces the dual-band capable clients to the 5 GHz band on dual-band access points.	
	Should balance wireless clients across APs on different channels, based upon the client load on the	

Features	Specifications	Compliance Yes / No
	APs.	
	Should support internal DHCP server.	
	WLAN Solution IEEE 802.11r roaming standard and shall support L3 mobility that allows a client to roam between APs on the same network but different client subnets, while preserving its IP address and existing data sessions.	
Network Policy features	WLAN solution should be able to create access policies in order to allow or block packets for inbound traffic/outbound traffic.	
	WLAN solution (either integrated or through external firewall) shall have a capacity to inspect all traffic from each user session and allow or deny any traffic that does not satisfy specified policies.	
	WLAN solution (either integrated or through external firewall) shall provide identity-based controls to enforce application-layer security and prioritization. E.g You tube to be given defined bandwidth like 1 Mbps and some apps like Facebook to be denied or given defined bandwidth.	
	WLAN solution shall be capable of controlling bandwidth per user.	
Spectrum scanning	WLAN solution shall be capable enough to scan the 2.4 or 5GHz radio bands to identify sources of Wi-Fi and NON WI-FI interference sources, and make the results available locally and to a remote management solution.	
WLAN Security	An integrated or External wireless intrusion prevention system shall be proposed with following features:	
	1. Should prevent students/users connecting to rogue AP and also prevent an outside user trying to connect to campus WLAN.	
	2. Should prevent Ad-hoc connections (i.e. clients forming a network amongst themselves without an AP)	
	3. Should prevent windows bridge (i.e. client that is associated to AP is also connected to wired network and enabled bridging between two interfaces)	
Warranty	3 Years onsite warranty	
Indoor Access Points		
	Access point should be 802.11ac.	

Features	Specifications	Compliance Yes / No
	Dual radio, dual band capable of supporting 2.4 GHz & 5 GHz simultaneously.	
	3x3 MIMO with 3 spatial streams	
	The Wireless AP should support 10/100/1000 Base-T PoE port.	
	The Wireless AP should be UL2043 Plenum rated.	
	Access points shall have Kensington security slot.	
Warranty	3 Years onsite warranty	

11. Network Switches for Wi-Fi network

Features	Specifications	Compliance Yes / No
Ports	24 RJ-45 auto-negotiating 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE, IEEE 802.3at)	
	4 SFP 1000 Mbps ports	
Memory and processor	32 MB flash; packet buffer size: 4.1 Mb	
Mounting	Mounts in an EIA-standard 19 in. Rack	
Performance	100 Mb Latency : < 5 μ s (LIFO 64-byte packets)	
	1000 Mb Latency : < 5 μ s (LIFO 64-byte packets)	
	Throughput : up to 41.7 million pps (64-byte packets)	
	Switching capacity : 56 Gbps	
	MAC address table size : 8000 entries	
Environment	Operating temperature : 0°C to 40°C	
	Operating relative humidity : 10% to 90%, noncondensing	
	Nonoperating/Storage temperature : -40°C to 70°C	
	Nonoperating/Storage relative humidity : 10% to 95%, noncondensing	
	Altitude : up to 16,404 ft. (3 km)	
	Acoustic : Low-speed fan: 44.9 dB, High-speed fan: 53.3 dB	
Electrical characteristics	Voltage : 100-127/200-240 VAC	
	Maximum power rating : 474 W	
	PoE power : 370 W PoE+	
	Frequency : 50/60 Hz	
Safety	UL 60950; IEC 60950-1; EN 60950-1; CAN/CSA-C22.2 No. 60950-1-03	

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Features	Specifications	Compliance Yes /No
Warranty	3 Years onsite warranty	

RST – 06 :- Buyback Items details

Sl.No	Description	S.No	Hardware Configuration
1	ML Proliant 350 G5, with Monitor	INI70402TY	Intel Xeon 3.0 GHz, 2 GB RAM, HDD 146 x 6, Optical drive, floppy drive. RPS
2	ML Proliant 350 G5	INI7030D5N	Intel Xeon 3.0 GHz, 2 GB RAM, HDD 72 x 3, Optical drive, floppy drive, RPS
3	ML Proliant 350 G5	INI7030D6N	Intel Xeon 3.0 GHz, 2 GB RAM, HDD 72 x 3, Optical drive, floppy drive, RPS, DAT 72 Tape Drive
4	ML Proliant 350 G5	INI720030T	Intel Xeon 1.6 GHz, 2 GB RAM, HDD 72 x 3, Optical drive, floppy drive, RPS, DAT 72 Tape Drive
5	ML Proliant 350 G5	INI70402TX	Intel Xeon 1.6 GHz, 2 GB RAM, HDD 72 x 3, Optical drive, floppy drive, RPS, DAT 72 Tape Drive
6	ML Proliant 350 G5	INI70402TM	Intel Xeon 1.6 GHz, 4 GB RAM, HDD 72 x 3, Optical drive, floppy drive, RPS, DAT 72 Tape Drive
7	DL 320 G5	CN68160HOS	Intel Xeon 2.4 GHz, 4 GB RAM, HDD 160 x 2, Optical drive, floppy drive,

Check List

S.No	Details	Enclosed Yes / No
1	Covering letter	
2	Authorization letter to participate in tender	
3	Tender Cost DD	
4	EMD DD	
5	RST – 01 (Organization Profile)	
6	RST – 02 (Tenderer particulars)	
7	RST – 03 (Annual Turnover)	
8	RST – 04 (List of Similar works)	
9	RST – 05 (Compliance for specifications)	
10	RST – 06 (Buyback items list)	
11	Signed and stamped tender document along with pre bid minutes	
12	Brochures	

ANNEXURE-II
(PRICE BID)

CONTENTS OF PRICE BID

1. Covering Letter containing:
 - a. Tenderer Name & Address
 - b. Bid validity
 - c. Adherence to Prices quoted throughout the tender
2. Price Bid ([RSP-1](#)) Price Bid. The Bid should include all items specified in the bill of materials in Annexure 1
3. Price Bid (RSP-2) Buyback items price.

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RSP – 01 RESPONSE SHEET TO PRICE BID

(Three years warranty cost of all the item should be included in price)

All Figures in Rupees

Sl. No	Description / Specification	Qty	Unit Rate	All applicable Taxes and Duties in %	Amount of all applicable taxes	Total Amount inclusive of all taxes and duties + 3 years warranty cost
1	High end servers	2				
2	Server	1				
3	1.2TB SAN HDDs (Extended License also required)	12				
4	KVM Switch (video, keyboard, and touchpad) with 8port controller	1				
5	Rack Mountable Monitor for KVM Switch	1				
6	500 users license UTM with logging and reporting.	1				
7	L3 Switch with 2 Interface Slots and redundant power supply	2				
8	Windows Server Datacenter 2012 R2 SNGL OLP NL Acdmc 2Proc	2				
9	WinSvrCAL 2012 SNGL OLP NL AcdmcDvcCAL	300				
10	ExchgSvrStd 2013 SNGL OLP NL Acdmc	1				
11	ExchgStdCAL 2013 SNGL OLP NL AcdmcDvcCAL	100				
12	Windows Server OS Standard 2012	4				
13	Office 365 license	5				
14	IP Based CC cameras with NVR.	8				
15	IP Cameras Network Accessories (Lumpsum)	1				
16	A3 Ordinary Xerox scanner printers	3				
17	Symantec Protection Suite ENTERPRISE EDITION 4.1 PER USER BNDL MULTI LIC GOV BAND A ESSENTIAL 12 MONTHS for Existing Part Number:4GMSOZZ0-ER1GA	50				
18	Nitro PRO PDF editor version – 10 or Latest Version	10				

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Sl. No	Description / Specification	Qty	Unit Rate	All applicable Taxes and Duties in %	Amount of all applicable taxes	Total Amount inclusive of all taxes and duties + 3 years warranty cost
19	Symantec Protection Suite ENTERPRISE EDITION 4.1 PER USER BNDL MULTI LIC GOV BAND A ESSENTIAL 12 MONTHS for Existing Part Number:4GMSOZZ0-ER1GA	50				
20	Wi-Fi Network Access points	24				
21	24 Port fiber gigabit switch	4				
22	Wi-Fi network Accessories (Lumpsum)	1				
23	Installation, Commissioning, and Migration Charges for all the supplied items inclusive of Wi-Fi accessories, labour and cc cameras accessories, labour charges etc (Lumpsum)	1				
Total Amount in Figures						
Total Amount in Words						

Place :
Date :

Signature of the Bidder with Seal

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RSP - 02 : RESPONSE SHEET TO PRICE BID for Buyback items

SI.No	Description	S.No	Hardware Configuration	Total Amount In Rs.
1	ML Proliant 350 G5, with Monitor	INI70402TY	Intel Xeon 3.0 GHz, 2 GB RAM, HDD 146 x 6, Optical drive, floppy drive, RPS	
2	ML Proliant 350 G5	INI7030D5N	Intel Xeon 3.0 GHz, 2 GB RAM, HDD 72 x 3, Optical drive, floppy drive, RPS	
3	ML Proliant 350 G5	INI7030D6N	Intel Xeon 3.0 GHz, 2 GB RAM, HDD 72 x 3, Optical drive, floppy drive, RPS, DAT 72 Tape Drive	
4	ML Proliant 350 G5	INI720030T	Intel Xeon 1.6 GHz, 2 GB RAM, HDD 72 x 3, Optical drive, floppy drive, RPS, DAT 72 Tape Drive	
5	ML Proliant 350 G5	INI70402TX	Intel Xeon 1.6 GHz, 2 GB RAM, HDD 72 x 3, Optical drive, floppy drive, RPS, DAT 72 Tape Drive	
6	ML Proliant 350 G5	INI70402TM	Intel Xeon 1.6 GHz, 4 GB RAM, HDD 72 x 3, Optical drive, floppy drive, RPS, DAT 72 Tape Drive	
7	DL 320 G5	CN68160HOS	Intel Xeon 2.4 GHz, 4 GB RAM, HDD 160 x 2, Optical drive, floppy drive,	
Total Amount in Figures				
Total Amount in Words				

Place :
Date :

Signature of the Bidder with Seal