Ref: FSM/Computer/HW-New Block/2013
Date: 26th April, 2013

Re: Procurement of Hardware (Servers, Thin Clients, Printers , Network Equipments)

FORE School of Management (FSM) has been established by the Foundation for Organisational Research & Education, a non-profit organisation, with a mission to achieve and sustain Leadership in Management Education, Research, Consultancy and Development. FSM is one of the premier Business Schools in India.

The computer centre at FSM is equipped with state-of-the-art branded computer systems inter connected through structured Ethernet based LAN and WiFi across the institute.

FORE School of Management, under an expansion programme for the infrastructure, is planning to build 3 Nos lab cum class rooms for students with 60 seats each. Each lab would have 60 thin clients. All thin clients can be activated simultaneously. The institute plans to implement application provision and presentation using Citrix XenApp Application. Besides, one more Lab will also be equipped with desktops under existing LAN.

The proposed plan comprises of procuring 3 servers centrally connected to SAN storage apart from Desktops, Thin Clients, printers etc as mentioned in Annexure-4. The servers will work in load balanced manner using Citrix inherent load balancing for farm.

Also it is proposed to use Windows 2012 Hyper-V for provisioning VM and use NLB feature for applications which cannot load balance using Citrix.

FORE School of Management already have active directory implemented.

Hardware Implementation - Statement of Work is attached for your understanding (Annexure-1) while Citrix implementation statement of work is listed at Annexure-2.

A list of Applications is also attached (**Annexure-3**) for reference, which needs to be published.

Therefore, if you are interested in supplying the items listed in the annexure, undertake the project on Citrix implementation and provide support, you may please send your offer with detailed configuration / specification, scope of work and deliverables in a closed envelope mentioning "Quotation for Hardware – 2013" on the cover, by courier or drop it in the box kept with the security guard of FORE School of Management on the following terms and conditions latest by 4: 00 p.m. on or before 5th May, 2013.

Please note that we want 3 years' warranty for the servers, storage, desktops, thin client and the printer.

For any further clarification please feel free to contact Manager (Systems) at sunit@fsm.ac.in.

The above tender has been uploaded on the home page of our official website http://www.fsm.ac.in under the caption "**Tenders**" on top right hand side of the page.

Also attach MAF for the server and storage.

Terms and Conditions

	• Delivery should be made to FORE premises • No delivery charges will be paid extra • Tax shall be paid as applicable
Payment	• **30%** of the complete order value will be paid along with order with Bank Guarantee for same amount else no advance. • **50%** of the order value within 7 days of total delivery. In case of no BG 80% will be released. • Balance **20%** after installation of OS and satisfactory commissioning & performance of the server after Citrix implementation.
Integration & Implementation	• Installation of OS. • Integrate with the LAN • Hardware Implementation • Citrix Solution Implementation

Thank you.

Yours sincerely,

(Sunit Datta)
Manager (Systems)

Annexure – 1

Hardware Implementation - Statement of Work

Task/Component	Feature to be implemented
Servers and Storage	1. Rack Mount Servers and Storage 2. Correctly cable the storage enclosures and servers for full path redundancy 3. Update the firmware of the Servers 4. Prepare Servers for Operating Systems 5. Create RAID 1 for OS and Applications 6. Attach it to central SAN Storage 7. Provision Hyper-V VM for implementing Citrix Components 8. Align correct segment of HDD formatting with LUN segment and VM files. 9. Need to provision fail over for server software which are not load balanced by Citrix Farm 10. If needed provide NLB for some application load balancing 11. Configure Multi-pathing (Storage Vendor provided) 12. Configure best practices for Citrix DB and App by provisioning correct LUN with correct LUN segment. 13. Provision correct security practices all the VM, Citrix, DB 14. Provision filtered and important logging and alerts

Annexure-2

Citrix Implementation - Statement of Work

Task/Component	Feature to be implemented
Operating System	Windows Server 2012, std edition
Servers build details	3 for XenApp,
Citrix databases needed	Data Store, Resource Manager summary database and configuration logging

Task/Component	Feature to be implemented	Responsibility
Servers build Details	Install Windows 2012, Std • Install terminal services on up to 3 slated for XenApp 6.x • Install IIS on 2 new servers slated for XenApp Web • Install all required windows patches/updates	Vendor
Citrix License Server	Install new XenApp Enterprise license server, activate and allocate licenses required for solution	Vendor
Terminal Server Licensing	Verify proper communication and configuration of the TS licensing service is in place	Vendor
XenApp installation	Install XenApp 6.x on 3 physical servers • Install updates/patches for XenApp 6.x • XML port will be determined on-site • License server will be determined from above selections • Farm name will be determined by FORE • Data Store location will be an existing MS SQL server	Vendor
Additional XenApp components	Installation and configuration of the following components: • Health Assistant • Resource manager summary database - configure database connection server • Installation Manager share and network account	Vendor
Application Installations	Implement the following applications for the server farm • Microsoft Office 2010 standard • Latest Adobe Acrobat Reader • Telnet client	Vendor

	FORE will ensure the compatibility of all required applications with windows Terminal services. All applications will be required to have been certified to run in a Citrix Presentation Server environment. If required, the vendor will need to be prepared to troubleshoot any application to the maximum of 4 hours time for any given application.	
Application Publishing	• Create up to four (4) Active Directory groups for published and/or streamed application delivery as needed with IT staff assistance. • Publish secured Desktop to appropriate groups if requested	Vendor Vendor
XenApp Web	Citrix XenApp Web: • Best practice settings and configuration.	Vendor
Server Settings	Individual Server settings (via GPO or Citrix policies). • Use Citrix policies when available and appropriate	Vendor
Load Management	Verify proper Load management of XenApp 6.x servers between all servers. • Establish Load Evaluators for each server hardware type or farm • Assign proper Load Evaluators to servers • Initial test of Load Management	Vendor
Group Policy, Citrix Policies, and user Environment	Group Policy and Citrix Policies: • Verify separate OU is in place to control Citrix sessions • Create desktop lockdown GPO and "All Users" GPOs to manage common and restrictive settings. • Create Citrix printing policy • Verify all users are set to use Terminal Server Roaming profiles • Verify all users have either a home directory or Terminal Server home directory assigned.	Vendor
Client Access	• Client Access Methods • Citrix XenApp Web is expected to be the only client access method for general users.	Vendor
Systems Testing	Testing for XenApp 6.x farm • Test application functionality for all XenApp streamed or locally installed applications. • Test printing form applications and other application specific functions. • Test connectivity to XenApp 6.x servers through the XenApp Web • Test smooth installation of latest ICA client on	Vendor

	client devices; document any needed variations needed for installation. • Test Resource Manager Summary database (via reports, connectivity).	
Final System Adjustments	• Apply any needed hot fixes based on testing results • Adjust farm and server settings according to test results as needed. • Final GPO settings to control user access and security.	Vendor
Knowledge Transfer	Vendor to document final system configuration and outline main administrative tasks, and their steps. PDF will be the format for this deliverable output.	Vendor

DELIVERABLES

a. In addition to delivering a comprehensive Citrix XenApp server farm within the FORE requirements, the vendor will deliver "as-built" documentation that will include the following elements at a minimum:

- Hardware and operating system configurations

- Citrix Server and Server Farm configuration

- XenApp Web configuration.

b. Knowledge Transfer to assign FORE staff of systems management, design and maintenance.

Annexure – 3

List of applications to be published under Citrix environment

1	Windows XP Service Pack 3/Windows 7
2	Antivirus (Symantec Network Version)
3	Office 2007
4	Adobe Reader
5	Win Rar
6	MS Project 2007
7	Mozila Firefox
8	Google Chrome
9	Internet Explorer 8
10	Flash Player
11	SPSS 10 & 20 (Network Version)
12	SAP
13	Nero 7
14	Cute PDF Writer
15	Network Printer HP 4015n & HP LaserJet M3035
16	Capital Line
17	Prowess
18	VLC Player
19	Ccleaner
20	Cognos (Optional)
21	Mini Tab (Optional)
22	Rational Rose (Optional)
23	IBM SPSS -AMOS (Network Version)
24	Simulation Softwares

Annexure - 4

Hardware	Description	Qty
Server (IBM/HP/DELL)	Intel Xeon 8 Core E5-2680 2.7 GHz, 20 MB Cache (Dual Processor) 64 GB RAM PC 3L 10600 CL9 ECC DDR3 1333 MHz LPRDIMM, 2.5" Chassis with 16 Hard Disks 2 X 300GB HDD 15000 RPM (6GBPS SAS 2.5") SATA DVD-ROM 1 Extra Slot for HDD RAID controller with 512MB cache for RAID 0, 1, and 5 Hot plug redundant power supplies 4 x 1 Gbps Ethernet Port 1 Dedicated Management Port 2 Fiber Channel HBA 3 years 7 x 24 , with 4 hours response time	3
Storage (IBM/HP/DELL)	Dual Controller with 4GB Cache 12 x 600GB 15K 3.5-inch HDD 2 x 8Gb FC 4 Port Card 2 x 4 to 8 Partition Upgrade 1 x 8Gb FC SFP SW Transceiver (Pair) 2 x - Line cord - 2.8M 10A/250V C13(2P+Gnd) (India) 6 x Cable,5M LC/LC Fibre Optic 6 x Emulex 8Gb FC Dual Port HBA	1
Thin Clients	WYSE T50 or HP T510	180
Desktop	HP i5 3rd Gen , 4 GB RAM, 500 GB HDD, ODD, Key Board, mouse, 18.5" TFT	45
Printer	HP LaserJet M3035	1

Software		
Citrix	Citrix XenApp Suite	180
Windows Servers	Windows Server Std Acdmc OLP	6
Windows RDS	Windows Remote desktop CALS Acdm OLP	200

Networking		
Switches	HP 2620-24 Switch	12
Ruckuss Wireless AP	ZoneFlex single-band (2.4 GHz) Entry-Level 802.11n Wireless Access Point, 8-element smart antenna, one GE port, with mount bracket, partner premium and power adaptor	11
Ruckuss Wireless controller License	Ap License upgrade from 12 to 25	1
Rack 15U	Rack 15U – Branded	6
Rack 36U	Rack 36U - Branded	1
Patch Cord 1 Mtr	Patch Cord I/O to System - Avaya/AMP	255

Patch Cord 1 Mtr	Patch CordJack to Switch - Avaya/AMP	255
Jack Panel	24 port – Avaya/AMP	12
Cable Manager	Cable Manager	12

Networking Charges		
I/O punching	I/O punching	255
Rack Installation	Rack Installation	6
Ferruling	Ferruling	255

Citrix Solution Implementation	**Citrix Solution Implementation**	**1**

** Payment of I/O Punching and ferruling will be as per actual.