

Virtual Desktop Infrastructure for IGIDR

Sealed quotations are invited from authorized partners of OEM providing VDI solutions. The sealed quotations should be supplied in two parts “**Technical Bid (Part A)** “ and “**Financial Bid (Part B)**” within the due date and specified time in separate envelopes and marked on top accordingly.

These two sealed envelopes should be further put in one Master Envelope superscribed with “**VDI for IGIDR**” in bold Letters.

***IGIDR has octroi exemption privileges.**

*Please quote the **academic price** for hardware and software components as IGIDR is a deemed University.*

Please drop the sealed quotation in the "Tender box" kept at Administration department by 12th November 2014 before 4:00 p.m

The quotations should be addressed to the following.

TO

The Registrar

Indira Gandhi Institute of Development Research,

Gen. A.K.Vaidya Marg, Santosh Nagar

Goregaon (E)

Mumbai - 400 065 INDIA

IGIDR reserves the right to accept or reject any proposals without assigning any reasons thereof.

Supply, Installation, Testing & Commissioning of Desktop Virtualization Solution at IGIDR.

Background

IGIDR is spread across 15 Acres of land and entire campus is inter-connected with Local Area Network, connecting around 150 desktops and laptops. Users access various standard and statistical applications like SAS, STATA, EVIEWS, MATLAB, MATHEMATICA etc. on Windows based desktop. These machines are of different Make/ Model and configurations aging 1-5 years.

The existing client computing environment has some challenges; which are listed as follows: -

- New generation hardware comes with more and more resources (CPU/ HDD/ Memory etc.); which are not fully utilized for business purpose.
- User saves business data in local HDDs of their respective Desktop/ Laptop; for which there is no backup taken. In case of hardware failure, there is a chance of data loss.
- Compliance of security policy and Patch management on all the Desktop/ Laptop is a huge task in itself.
- Desktop/ Laptop maintenance including OS and other software upgrades also demand considerable time and efforts from IT Facility Management Services Team.
- With the increase in hardware age of these Desktop/ Laptop; availability and reliability of asset goes down and maintenance cost increases.
- Lab setup is challenge for every changing batch.

To overcome these challenges and to achieve operational excellence, IGIDR is planning to deploy a pilot of 30 virtual desktops using existing client computing hardware and Virtual Desktop Infrastructure (VDI) solution. Application Virtualization can be deployed for some of the users who use applications; which does not save any data on local hard disks. Whereas VDI solution can be deployed for users, who mainly generate/ save data locally. As some statistical software have limited number of users license we would also like to have hosted sharing desktop or application virtualization to use these software from the shared server. As these statistical application are resource hungry a careful planning should be made while designing the solution. Whether to have pooled virtual desktop for the lab users or individual full virtual desktop for each user and use Application Virtualization, a study needs to be carried out for select functions. The proposed VDI solution shall address issues listed above and should be scalable to minimum 200 desktops in future.

The proposed solution of thin client and VDI solution shall address issues listed above and offer following benefits: -

- Lower the total cost of ownership as against standard full desktops
- Extend hardware life cycles beyond 5 years as thin clients do not have moving parts
- Lower energy requirement as thin clients draw significantly less power than a PC
- Initially IGIDR may use existing PC's to connect to the VDI infrastructure and may phase out the PC's as and when the life of the PC is over.

Virtualization in IGIDR:

IGIDR is in the process of deploying Desktop Virtualization using established solution like VMware, Citrix, Ericom, Microsoft solution. IGIDR proposes to deploy required server and storage infrastructure at Data Centre. The proposed VDI solution should be compatible with above mentioned technology.

IGIDR Scope:

- Any additional resources required to complete the solution shall be mentioned in the proposal.
- Power and Network provision will remain under IGIDR scope.
- Existing Active Directory infrastructure based on Windows 2008 and Database infrastructure based on SQL Server 2012 will be extended by IGIDR.
- We have Microsoft OVS agreement and have RDP license (60 nos) , desktop OS , windows 2008 server, office under this agreement. SQL server 2012, 5 users license.
- IGIDR has two number of Brocade ICX6610-24F-E switch in active-active mode at core level. The servers and storage will be connected to these switches for LAN

Scope of work

Desktop Virtualization Assessment and Capacity Planning

- IGIDR shall provide a list of existing Desktop/ Laptop machines deployed in various functions e.g. Finance, Administration, Computer Department, etc.
- Vendor should carry out detailed study (Hardware configuration and software/ application installed) for these machines.
- Vendor to define the software license details and quantity in the proposal and quote for the same.

Design of VDI solution

- The design/ architecture should be scalable to minimum 200 desktops in future.
- Vendor should submit detailed technical design and architecture for VDI solution. It should be in accordance with standard architecture/ best practices from for VDI solution, clearly stating server hardware/ OS/ Network/ database required to host the entire solution. The same will be evaluated in technical selection criteria for any additional hardware/ software resources.
- Study existing Active Directory infrastructure and configure Group policy as per IGIDR requirement. It is to be noted that; IGIDR is planning to deploy VDI solution for existing subset of Active Directory users (individual/ common user id); hence no new AD user / device license is to be configured for the same.
- IGIDR need a Unified Storage Solution and the proposed VDI solution should work with both File / Block level storage technologies to store user profile and user data with quota management and common access folder. Each user will be given 20 GB storage space so we need 4 TB for 200 users and 2 TB for storing research common data and backup. Any additional space for VDI should be considered by the vendor.
- In future IGIDR may use these virtual desktops over internet via laptops/ smart phones/ tablets etc. The proposed solution should be compatible/ scalable to cater to this requirement. To begin with, the VM must be accessible in local LAN via existing client computing hardware and subsequently from proposed Thin/Zero Client using (MAC addresses binding) and in future it can be accessible from all other forms of devices over internet as well.
- Vendor should provide all related licenses with quantity required for VDI implementation
- Bidder must have back-to-back arrangements / agreement in place to ensure support / spare parts from respective OEMs of hardware & Software during Warranty and AMC period.

Supply & Implementation of VDI infrastructure

Supply Thin Clients as per Specifications given:

- Thin Client Specifications: Thin clients should Support all required protocol to support all the VDI solution as per market standard Support USB multimedia devices (keyboard, mouse), scanner, printer, web camera, USB data card etc.
- Supply of Licenses for software as per specification provided in the tender
- Implementation of VDI infrastructure (50 Virtual Desktops) with Server, Storage, Active Directory Group policy and any other related configuration
- Integrate VDI solution with existing LAN/ WAN and Client Security Infrastructure. Vendor should take care of network and Information security during implementation. VMs can be a part of multiple VLANs and they should communicate with each other.
- Migrate lab users Physical Desktops to VDI Infrastructure including user data from local desktop storage to proposed Unified storage if required.
- Deployment of existing client computing hardware as Thin Client and testing of IGIDR applications from these endpoint and troubleshoot related issues if any.
- Demonstrate Backup/ Restore of individual VMs and restoration of entire architecture / skeleton of VDI solution from backup database.
- Provide on-site training to IGIDR IT Staff on the VDI infrastructure

Support and Maintenance during Warranty and AMC

As IGIDR is considering the entire virtualization as a solution for high-availability computing platform, therefore the vendor has to provide support as a single point support source for both hardware as well as software as per SLAs defined in this document. The total support cum warranty period would be for 3 years warranty.

Vendor need to provide Comprehensive onsite support during Warranty and AMC period covering

- VDI Server related issues
- Upgrade of VDI Server Software (as & when applicable)
- Upgrade of VDI Client Software (as & when applicable)
- VDI related problem resolution/troubleshooting
- Thin Client related problem resolution/troubleshooting
- Replacement / Repair of Thin client during support period

During warranty & AMC period, vendor has to inform and provide all patches/ updates and upgrades to IGIDR. Therefore vendor must execute agreements with OEM and submit proof of such agreement to IGIDR as a milestone activity.

During warranty & AMC period, vendor will provide support on technical issues such as testing & deploying patches, released by OEMs, in IGIDR environment.

IMPORTANT NOTE TO BIDDERS

- This Project is to be completed on Turn-Key Basis. Any hardware, software required for executing the project & not listed in this RFP, must be on vendor's account and bidder must take into account all such costing while submitting bids.
- Tender is non-transferable.
- Jobs awarded under this contract cannot be sub-contracted.
- During technical bid evaluation the vendor may be required to give Technical Presentation on the Architectural Design & SLAs.

VDI Technology Selection Criteria

- Licensing details of proposed VDI solution is to be provided as follows
Part No:
License Type: Standard/ Enterprise/ etc
Description:
- The proposed solution should be in accordance with standard architecture/ best practices from industry for VDI solution, clearly stating server hardware/ OS/ Network/ database required to host the entire solution.
- The proposed software should support cloning of virtual desktop such that only the delta changes are saved while the others are read from the base.
- The infrastructure should have central Network management for VMs.
- It should have small code base/ footprint to minimize maintenance, patching and to improve security
- Virtualization software should bootable from iSCSI / Fiber Channel SAN.
- The proposed software should support live Virtual Machine migration
- Virtualization management software console should provide the Manageability of the complete inventory of virtual machines, and physical servers with greater visibility into object relationships
- The VDI infrastructure should support Host /VM patch management with minimum downtime.
- It should fully integrate with Microsoft Active Directory for all authentication requirements without making any changes to Active Directory schema
- The proposed solution should have a single management console for managing the following:
Provisioning desktop pools and individual desktops
Editing existing Virtual Desktops and pools
Desktop Image creation, maintenance, and deployment
Manage connections to physical PCs, blades, terminal server session
Set user roles of desktops and assignment of applications.

Delivery Schedule

All Schedules will be calculated from the Zero Date i.e. Date of issue of Purchase Order. The Project is to be completed within 3 elapsed months from the date of issue of Purchase order,

Payment Terms

10% along with PO and balance after successful installation testing and commissioning of the vdi solution .

Warranty & SLA

All Hardware & Software

During warranty & AMC SLA would be as per SLA defined.

3 Years warranty from the date of installation and acceptance by IGIDR.

Hardware SLA:

Average uptime per site - 99% calculated on quarterly basis

Support 24x7x365 basis
Response – within 24 hours from call logged
Resolution – within 48 hours of from call logged

Software SLA

Support 24x7x365 basis
Response – within 4 hours from call logged
Resolution – within 24 hours from call logged

Special Conditions of Contract

- The Vendor is required to execute the order as a turn-key project and IGIDR shall not be responsible for any omission/deletion of any component and no additional cost shall be paid to vendor by IGIDR towards the same. Such component / accessories shall be provided by Vendor at his cost.
- Please provide complete bill of materials with part numbers which will be required to identify proper delivery.
- The training should ensure that IGIDR IT Staff are able to use, configure, support and maintain the hardware/ software effectively & independently.
- Vendor has to follow IGIDR Work Permit procedures, safety rules and regulations during execution of the contract.

Server & Unified storage Minimum Requirement (Brands should be leaders in Gartner magic quadrant**) . Higher processor, storage , memory and other components should be considered by the vendors for their proposed solution.**

Server :

Using 8 core processor
1+1 servers for (N+1) Redundancy Minimum 2 x 8 core Intel 2.6 GHz Processor
Minimum 196GB RAM using 1600 Mhz DIMMs
2 X 146 GB SAS HDD (raid 1)
NIC Ports: 1 Gig - 4 Ports
FC ports: 2 ports

Unified storage

7 TB Unified storage (usable) with Dual controller, and required IOPs to support the proposed VDI.
FC and 10 G Connectivity