For complete document refer the following link
https://goo.gl/1jNPEm

Call for Quotations

Proposals are hereby invited for supply/setup of a computer lab.

Section A

Proposals should accompany **quotations and a pointwise summary explaining what all requirements are met and to what extent**. This will be followed by shortlisting based on the technical merits of proposals and our budgetary constraints. We may call participants to explain/present the proposed solution in detail.

Requirement for computer lab setup

We need a computer lab setup to serve a set of diverse requirement arising from different departments. The computing lab is going to be a shared resource. Earlier setups comprise of individual desktops without any orchestration tools which made the task of offering uniform software environment across all terminals a challenge. Some applications required windows while others required Linux. We would like the lab to be shared across classes, courses, departments and programmes.

1. We have to set up a computer lab in a phase-wise manner. We are looking for 30 terminals in the first phase. This purchase includes hardware and software. The plan should also include how the solution would scale to 120 terminals. Right now we are just targeting 30 terminals.
2. At a later stage(in the next phase) we would like to include/manage existing desktop as fat clients with a uniform environment.
3. Our registered user count is 1300. At any given time only 30 users will be working.
4. A primary concern would be ease of manageability. We need total control over each endpoint in terms of the environment, software, user access rights, usb access control etc. This is the major challenge we were facing when we had individual desktops. Preliminary exploration has led us to believe that virtualization can offer us ease of manageability.
5. If the solution offers a thin client, thin clients should be completely manageable and details regarding their management console software should also be made available.
6. We will prefer an all in one form factor, 27-inch 4K display,
7. We will need support for USB for pendrive and other peripherals like a microcontroller, FPGA, digitizer tablet.

8. We don't have a specific preference for Virtualization,VDI and thin clients. **An elegant solution based on desktop and endpoint management solution/streaming desktop is something that we are keen to evaluate**.
9. We will need both, Linux (RHEL, Ubuntu) and windows environment.
10. There may be users using both Linux and windows. It is desirable to have integration of their windows homespace and linux homespace.
11. We will need antivirus/ Total security.
12. Shared Storage space assigned to each user should be defined and may be modified
13. Some of the applications may be graphics intensive and require GPU acceleration. Refertarget application in section B.
14. We will also be running audio, video, multimedia, conferencing applications. The provided solution should also support audio, video, multimedia, conferencing applications on the nodes.
15. The solution needs to include networking gear(switches etc.), network monitoring tools, endpoint monitoring analytics, remote support etc.
16. We need the ability to track physical assets like mouse and keyboards, thin clients. If they are disconnected from the network, it would be nice to know the approx time. Refer link. This will be a low priority requirement.
17. We will need a comprehensive installation and implementation service. All third party softwares will be installed at our end.
18. We will need power backup (UPS) with 5 years valid for 5 years from date of installation.
19. We need 5 years or more of hardware support, warranty.
20. We need 5 years or more of software support and upgrades.
21. We have a strong preference for globally renowned major hardware manufacturers, Major global players in VDI space.
22. We will prefer single window support for the entire solution.

We encourage you to discuss further regarding what all requirement can be relaxed. For further clarification please get in touch with Mr. Amol Gupta, amolgupta87@gmail.com , +91-9897860992. The proposals may be sent at amolgupta87@gmail.com , aksaxena61@gmail.com

Section B

Target application

Here is a list of target applications that we may be running

1. Computer Aided Design (CAD) applications/ Developer applications
   a. Matlab ([req](#))
   b. Mentor design toolchain
   c. Autocad ([req](#))
   d. solidworks ([req](#))
   e. shoe master
   f. vivado design suite/FPGA design toolchain from xillinx
   g. Visual Studio ([req](#))
   h. Librecad ([req](#))
   i. Octave
   j. codeblocks
2. Productivity and communication app
   a. MS office / Libre office / open office
   b. 7z
   c. chrome/firefox etc.
   d. JAVA
   e. Adobe (flash,pdf)
   f. evince, xpdf
   g. gimp/photoshop/
   h. gvim
   i. ammy Admin
   j. Teamviewer
   k. Italc/epoptes/ veyeon
   l. skype
   m. VLC
   n. DIa
   o. Xfig
   p. Visio

Xilinx Vivado System requirement:-
Processor: i5 or more 64bit processor
Memory: 8 GB ram or more.
Hard Disk Space : 1000 GB or more
Operating System: Windows 7/8.1/10 64 bit, RHEL 6/7 64 bit, Ubuntu 16.x/15.x/14.x 64bit, CentOS 6.x/7.x 64 bit
Communication: LAN connectivity (Floating)

Mentor Graphics System requirement:-

Server Configuration (only license machine)
Processor: i5 or more 64bit processor
Memory: 8 GB ram or more
Hard Disk Space: 1000 GB or More
Operating System: RHEL 6/7 64 bit, CentOS 6.x 64 bit
Communication: LAN connectivity (Floating)
Server Configuration(if they want to use the only xmanager, ssh):-
RACK Server or Desktop Server with 64-bit processor architecture
Memory : 64GB RAM or more.
Hard Disk Space : 1000 GB or more.
Operating System : RHEL Server.
Communication: LAN connectivity (Floating)

HEP1:-
Processor: i5 or more 64bit processor
Memory: 8 GB ram or more
Hard Disk Space: 1000 GB or More
Operating System: RHEL 6/7 64 bit, CentOS 6.x 64 bit
Communication: LAN connectivity (Floating)

HEP2:-
Processor: i5 or more 64 bit processor
Memory : 8 GB ram or more
Hard Disk Space : 1000 GB or More
Operating System: Windows 7/8.1 64 bit, RHEL 6/7 64 bit, CentOS 6.x 64 bit
Communication: LAN connectivity (Floating)

Cadence tool chain system requirement

Suggested System Requirements and Lab Set-up

Operating System	Hardware Requirements				Operating System Requirements
	Hard Disk Space		Size of the RAM		
	Minimum (GB)	Recommended (GB)	Minimum (GB)	Recommended (GB)	
LINUX	Server: 80	Server: 160	Server: 4	Server: 8	RHEL 6.x 64-bit
	Clients: 80	Clients: 160	Clients: 4	Clients: 8	

Section C

Software implementation

Here is a list of potential requirements

- We need the following environments up and running
  - Windows
  - Linux RHEL
  - Windows stateless guest access
  - Linux RHEL stateless guest access

We will be installing different target software CAD applications for different labs. We will be using a different image/environment. In the guest environment, anyone can log in and ask for account and permission to join some group. Based on different group membership he/she can access different lab environment. We might need some remote support if we are struck at some later stage.

- We need you to install and configure veyon .
- We will be offering a small persistent storage home space.
- We need a slightly larger storage space which will last only as long as session(scratch space). By end of the session, the user has to move that data to some other place(not part of this implementation) for future use.
- We need to ensure that the home space is being used largely for academic use. If there are lots of large files esp media files. We would like to issue few warnings via email and eventually delete those large files. This has to be automated.
- We need the ability to save modify different images. We will also need the ability to create different checkpoints and retrieve older versions. Conceptually this might be something similar to the code repository. There should be a possibility to add comments. This might help us in troubleshooting.
- The lab must be accessible to students from home i.e. remote access must be there.
- There should be a centralized login system. We should have the ability to create/approve user. We should have the ability to create groups, add remove users from groups. There should be a concept of expiry of membership from a group and expiry of account.
- Depending upon the requirement we decide what environment must be available/served. For eg., if there is a scheduled lab slot/test we want the same environment on all terminal serving the environment of the specific lab. Occasionally few(2,3) people might be working remotely or few terminals may be used by research scholar and they are free to choose the environment they are allowed to access. When there is no scheduled lab session the user gets to choose which environment he needs to log in. If he has permission to access certain environment he should be able to so.
- Sometimes we may want to give priority to scheduled lab session over casual users. Some user may leave their session locked we need the ability forcefully end their session.