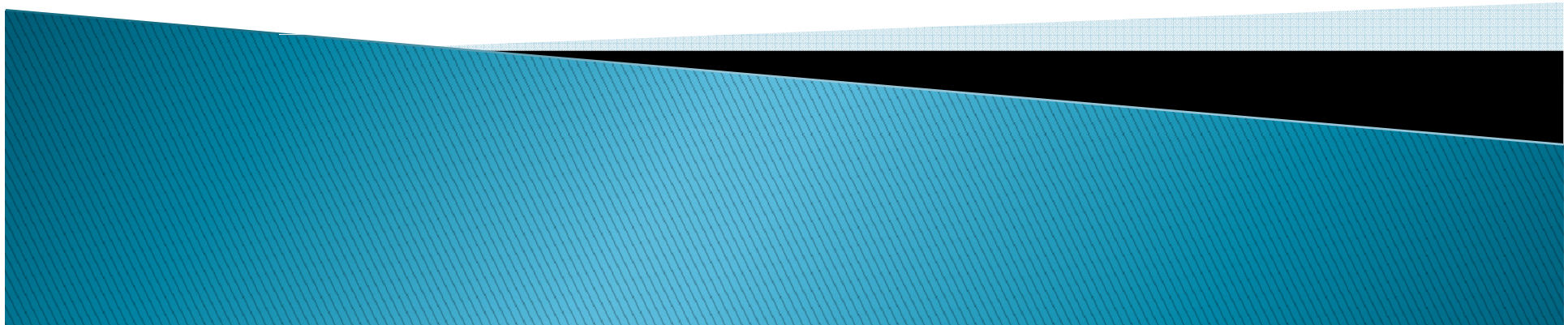


Using SERC Facility Basic Guideline for UG Students

August 18, 2011

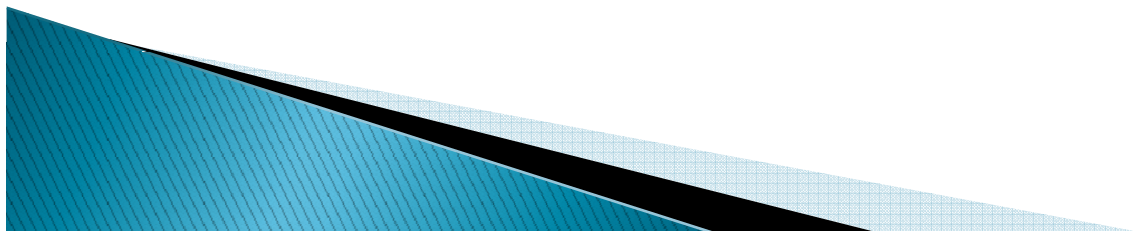
J. Lakshmi

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Bangalore-12



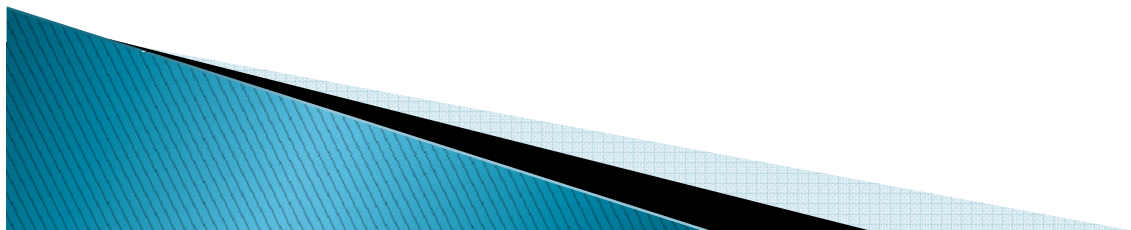
SERC Computing Facility

- Heterogeneous: Diverse in nature from system hardware, software and usage point of view.
- Distributed: Composed of many independent systems connected by a network.
- Shared: By many users working simultaneously on the same machine.



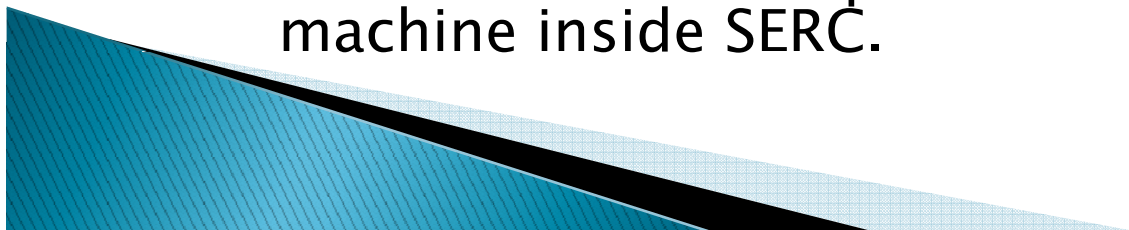
Heterogeneous

- ▶ Heterogeneous: Diverse in nature from system hardware, software and usage point of view.
 - Supercomputers: For really large problems; usually run parallel programs.
 - Batch Servers: For reasonably large and long running codes; execute serial or parallel programs.
 - Access Stations: Interactive usage like internet browsing, emails, editing, program development and testing, and other interactive software;
 - Visualization Workstations: Special purpose graphics hardware to support better graphical interaction; usually supported by specially written applications.
 - File Servers: Dedicated servers to support large storage areas.
 - Name Servers: Dedicated servers to support information services like userids, passwords, hostnames, etc. for a network of systems.



Distributed

- Distributed: Composed of many independent systems connected by a network.
 - Independent: Each system has its own system software that enables its usage.
 - Network interconnection: All systems are connected through the network.
 - Name Service: Each system on the network is bound to a name server for sharing common information like user logins.
 - File Service: All systems on the network access common file systems served out of the file servers.
 - Name services along-with file servers give a user the feature of single sign-on, i.e. any user is able to use the same userid-password combination on any machine inside SERC.

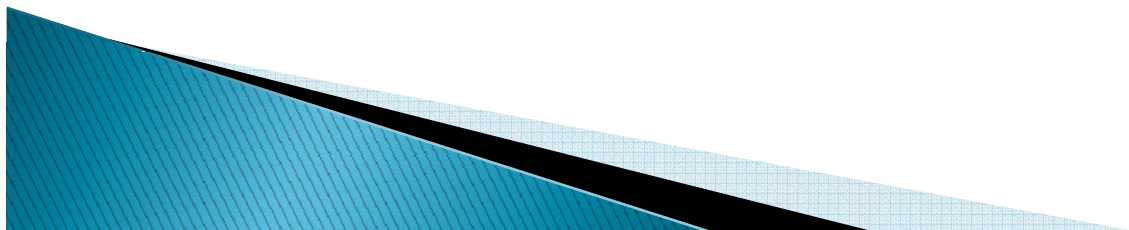


Difference from UG-lab facility.

- ▶ SERC facility is logically connected to the SERC domain, which is different from the domain of UG-lab.
 - ▶ Userid-password given to access SERC is administered by a different server, and hence when you change the password in SERC it affects only the SERC logins and not the UG-lab logins.
 - ▶ However, the file systems that provide your home areas come from the same server. So you see all your files once you login to any SERC machine.
 - ▶ Again, the desktop that you login to, on SERC machines, maybe different from that of your UG-lab because of the system diversity in SERC.
 - ▶ And, applications that you are using inside your UG-lab may be available at a different location on SERC machines or may NOT be installed.
 - ▶ Seek help in case you are not able to use the SERC machine/s:
 - helpdesk@serc.iisc.ernet.in
- Call 410/444 from inside SERC.

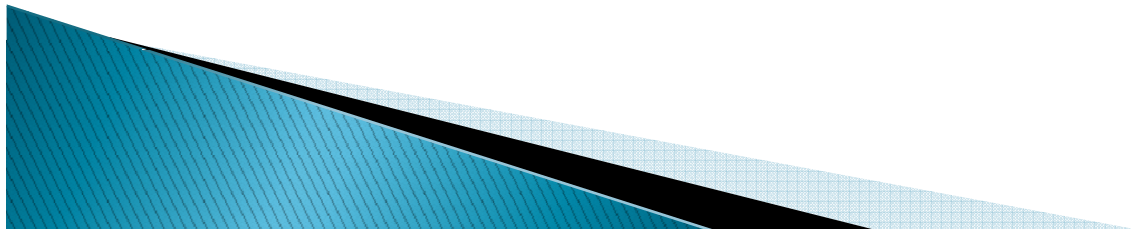
What should you know?

- ▶ SERC has two dominant flavors of Operating systems:
 - Unix based
 - MS-Windows based
- ▶ The userid-password given to you works on the Unix based machines and the home areas are restricted to these machines only.
- ▶ For Windows systems, all machines have one common userid called guest. This is a local userid and has access to the local resources of the desktop on the machine. Whatever you generate on that machine resides on the local machine and has to be copied to your home areas on the Unix systems, in case you to retain the data.
- ▶ UG Students can access any of the Access Station category of systems in SERC. These machines are located in terminal bays of the first and second floors of SERC.



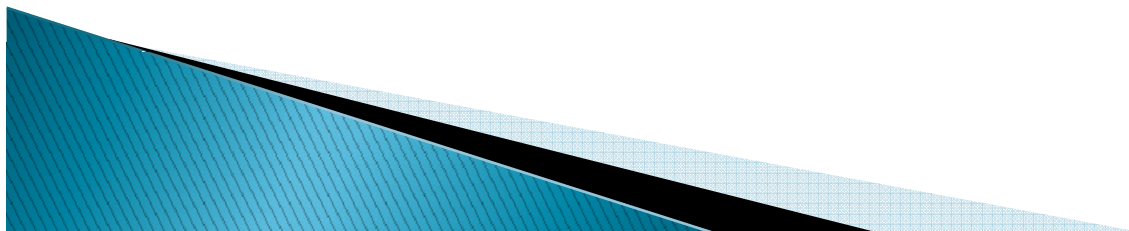
Unix Based systems

- ▶ SERC has many variants of Unix like Aix, Solaris, Irix, Linux-Fedora, Linux-Suse, Linux-CentOS, Linux-RedHat, etc.
- ▶ Each system in the terminal bay, has its own monitor and a system unit. These are labeled using a hostname and ip-address, that is used to identify the machine.
- ▶ Detailed description of the machines, in terms of its configuration and software, is hosted on the SERC home page under Computing Facility item.



General Features of Unix based systems

- ▶ All systems in the terminal bay will be powered on and displaying the login screen.
- ▶ Type in your userid followed by the password in the spacer provided on the login screen and hit enter.
- ▶ If you login successfully, you will come up on to a desktop. The choice of desktop to use can be specified on the login screen. Default is commonly set to the Gnome desktop.



Gnome Desktop

Applications Places System



Sat Oct 30, 2:37 AM

Fedora User



Computer



user's Home



Trash

Desktop Area

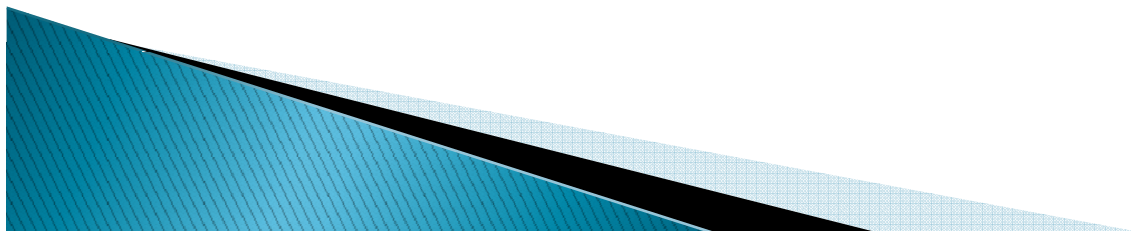
Top
Menu
Panel

Window List



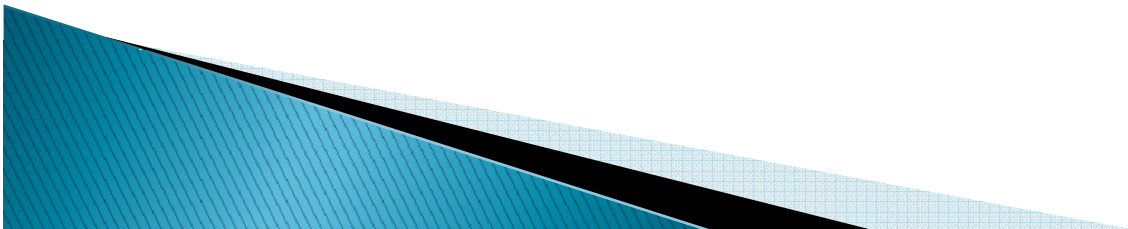
Opening a terminal

- ▶ Applications –> Accessories –> Terminal
- ▶ Right click on Terminal and select Add to launch panel or favorites.
- ▶ You will get a Unix shell command prompt wherein you can type any Unix commands.
- ▶ Commands like “which”, “whereis” or “locate” can be used at the command prompt to find out if a specific application is available on the machine.



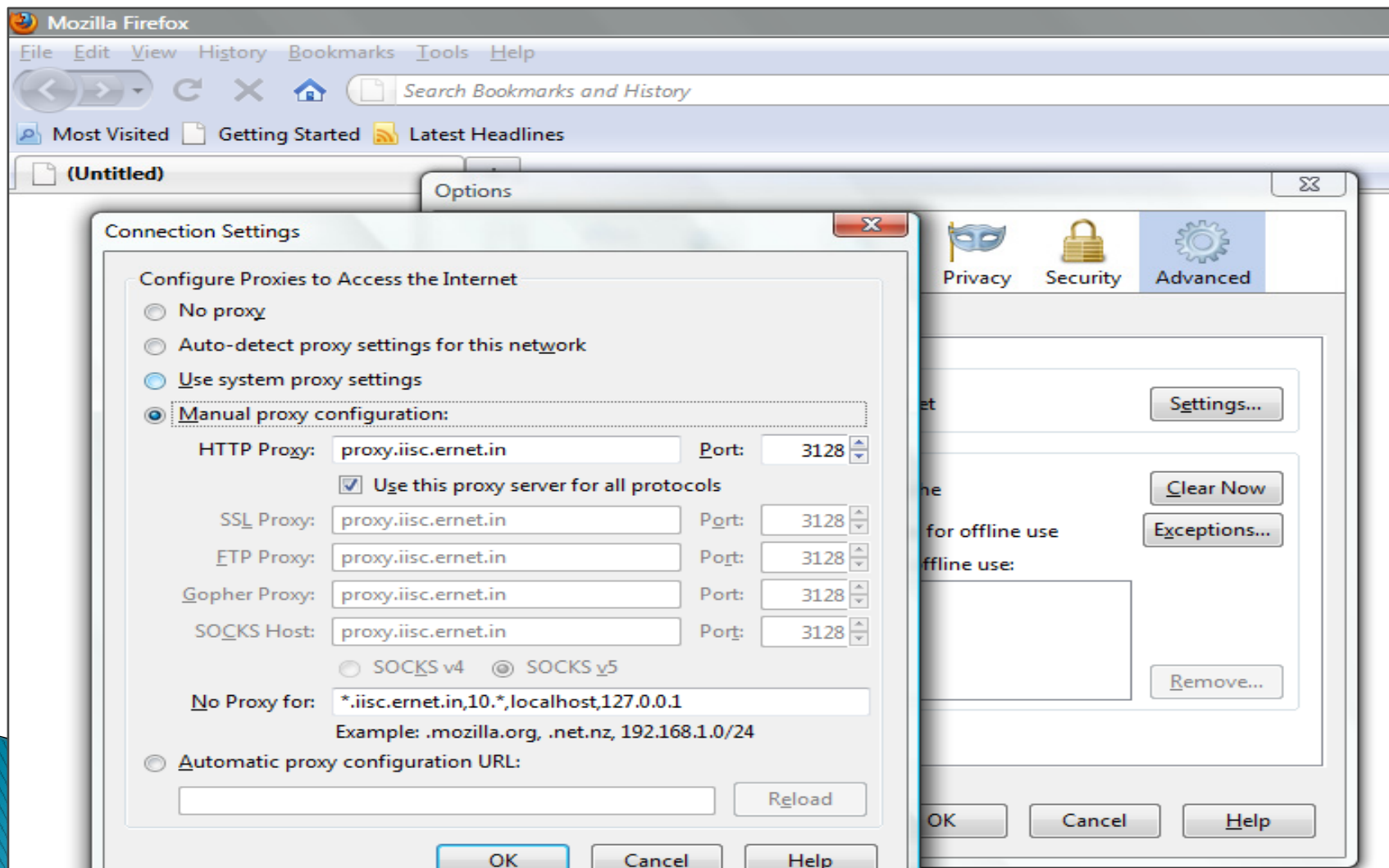
Accessing the internet

- ▶ Mozilla/Firefox is normally installed on all the Access stations in SERC. The icon is visible on the Gnome's top (launch) panel. Double click on the icon to initiate the application.
- ▶ Otherwise, choose Applications -> Internet and select the desired browsers from the drop down list.
- ▶ To successfully connect to the internet, you will need:
 - Proxy server proxy.iisc.ernet.in and port of access **3128**
 - an Internet user account and password. This is different from your SERC login accounts.

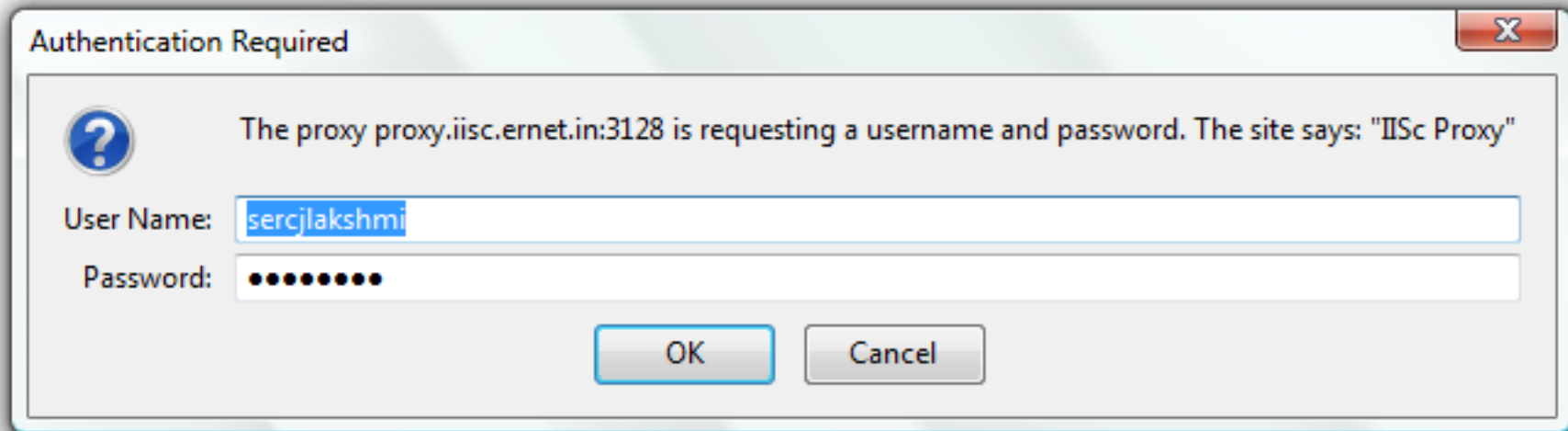


Proxy settings for the browser

- ▶ On the browser select Tools -> Options -> Network -> Settings



Proxy server authentication



Example: Checking your email



INDIAN INSTITUTE OF SCIENCE BANGALORE

User name:

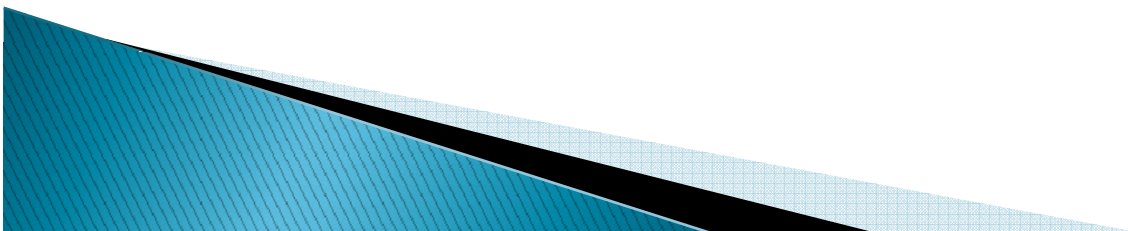
Password:

LOGIN

This is the access page to the email services of the Indian Institute of Science (IISc), Bangalore, India. Access to this system is open only to the authorized users of the IISc. Upon logging into this system you agree to the terms and conditions of the usage of this service.

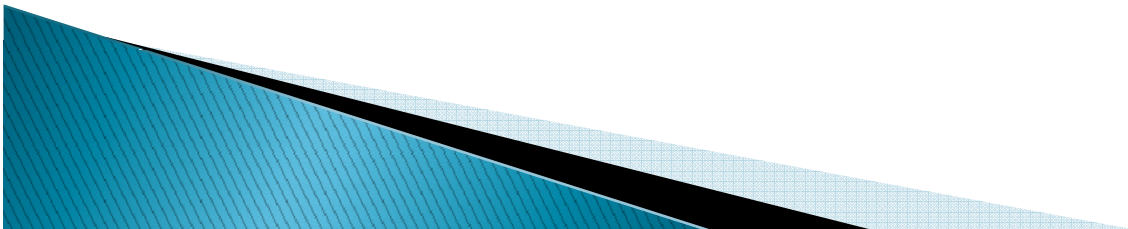
How to get various accounts.

- ▶ SERC Computational account: Room no. 103, Madam Sarala
- ▶ Internet Access account: go to following link
<http://www.serc.iisc.ernet.in/userinfo/userinfo.htm>
Fill in the [Internet Access Request Form](#) and register online and follow the procedure listed at http://nitss.serc.iisc.ernet.in/?page_id=98
- ▶ Email Account: Once the internet account is created, automatically the email-id will be granted and details mailed to you.
- ▶ For students desirous of using Wi-fi access inside IISc campus, you would need a wireless account. Print and fill the form available at <http://www.serc.iisc.ernet.in/forms/> and submit to Madam Sarala, SERC, room no. 103. After creation, details will be mailed to you.



Windows Based Systems

- ▶ SERC has nine Windows-XP based systems located in the first floor terminal bay.
- ▶ These systems are typically used for browsing or accessing Windows specific applications.
- ▶ All users have to use a common account called “*guest*” with a common home area of C:/Documents and Settings/guest
- ▶ This area has quota limit of 1GB.
- ▶ All systems have Windows-Office and Mozilla Firefox browser installed.
- ▶ Your internet access account is valid throughout all machines on the IISc network and has to be set for all browsers that you use.



Thankyou!
Any Questions?

