

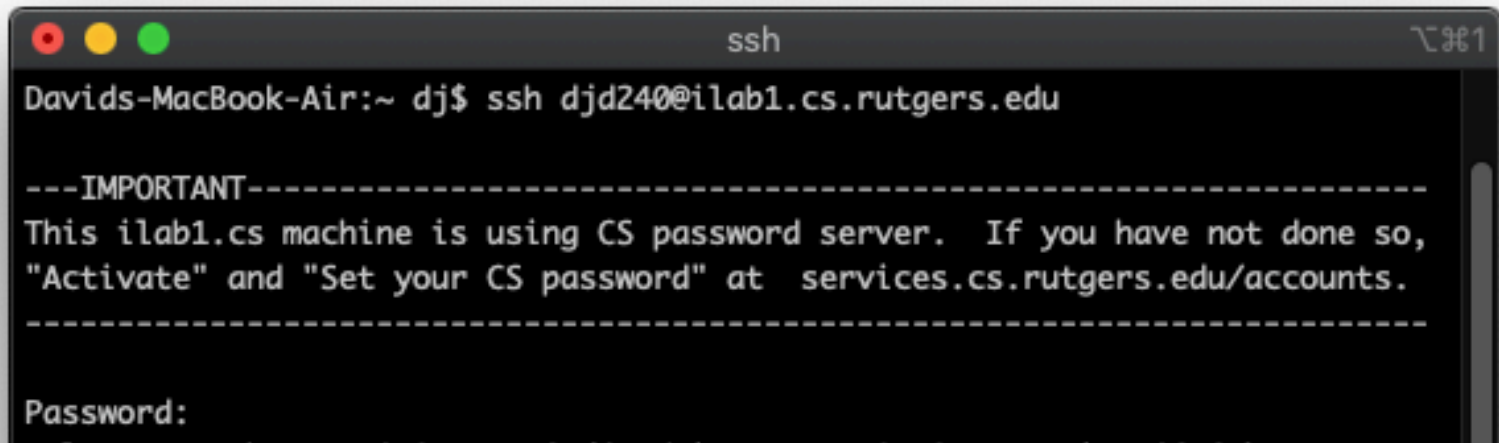
iLab Machines and Linux

iLab Machines

- Sign up for a iLab account if you haven't already
 - <https://services.cs.rutgers.edu/accounts/>
- Two Ways to use it
 - Via Secure Shell (SSH)
 - terminal (Mac/Linux)
 - Putty (windows)
 - Via remote desktop
 - X2GO (Windows/Mac/Linux)
 - Microsoft Remote Desktop (Windows/Mac/Linux)
- List of available iLab Machines
 - <https://report.cs.rutgers.edu/nagiosnotes/iLab-machines.html>

Connecting via SSH: Linux/Mac

- Open a new terminal
- Run “ssh <netid>@<ilabmachine>”
- Type in password to login

A screenshot of a macOS terminal window titled 'ssh'. The prompt is 'Davids-MacBook-Air:~ dj\$'. The user has entered the command 'ssh dj240@ilab1.cs.rutgers.edu'. The terminal output shows a message: '---IMPORTANT-----
This ilab1.cs machine is using CS password server. If you have not done so,
"Activate" and "Set your CS password" at services.cs.rutgers.edu/accounts.
-----'. Below this, the prompt 'Password:' is visible.

```
ssh
Davids-MacBook-Air:~ dj$ ssh dj240@ilab1.cs.rutgers.edu

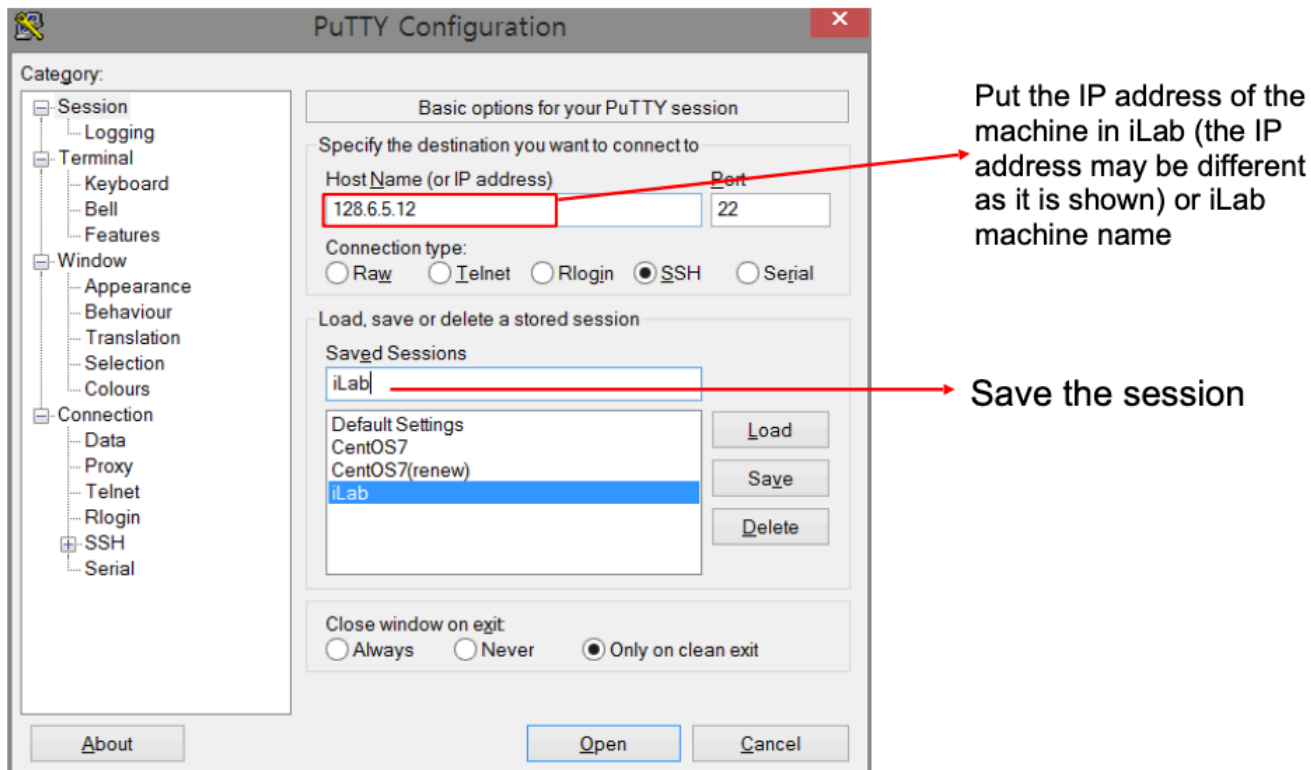
---IMPORTANT-----
This ilab1.cs machine is using CS password server. If you have not done so,
"Activate" and "Set your CS password" at services.cs.rutgers.edu/accounts.
-----

Password:
```

Guide: <https://www.howtogeek.com/311287/how-to-connect-to-an-ssh-server-from-windows-macos-or-linux/>

Connecting via SSH (Putty):Windows

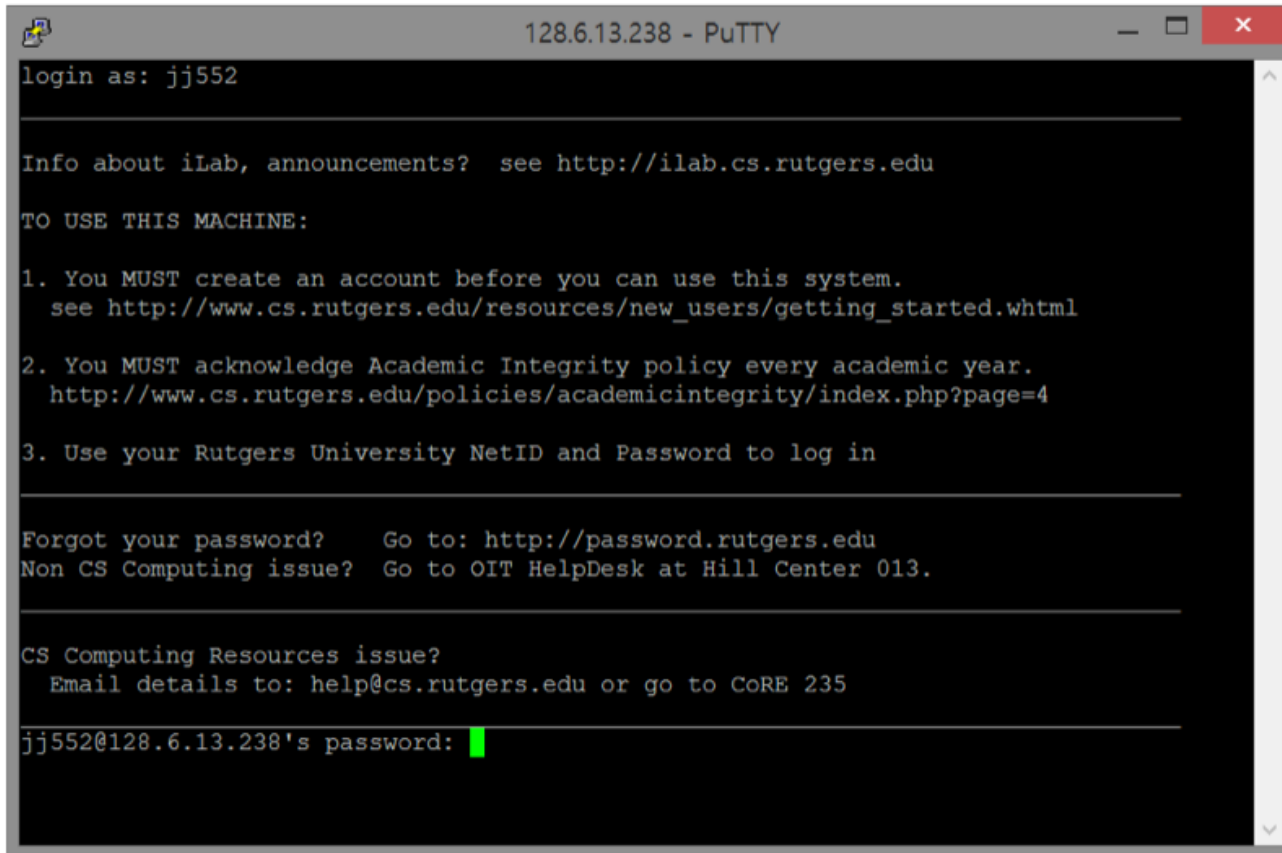
- Install Putty and configure Putty



Guide: <https://www.howtogeek.com/311287/how-to-connect-to-an-ssh-server-from-windows-macos-or-linux/>

Connecting via SSH (Putty): Windows

- Save session and open connection



```
128.6.13.238 - PuTTY
login as: jj552

Info about iLab, announcements? see http://ilab.cs.rutgers.edu

TO USE THIS MACHINE:

1. You MUST create an account before you can use this system.
   see http://www.cs.rutgers.edu/resources/new_users/getting_started.whml

2. You MUST acknowledge Academic Integrity policy every academic year.
   http://www.cs.rutgers.edu/policies/academicintegrity/index.php?page=4

3. Use your Rutgers University NetID and Password to log in

Forgot your password?   Go to: http://password.rutgers.edu
Non CS Computing issue? Go to OIT HelpDesk at Hill Center 013.

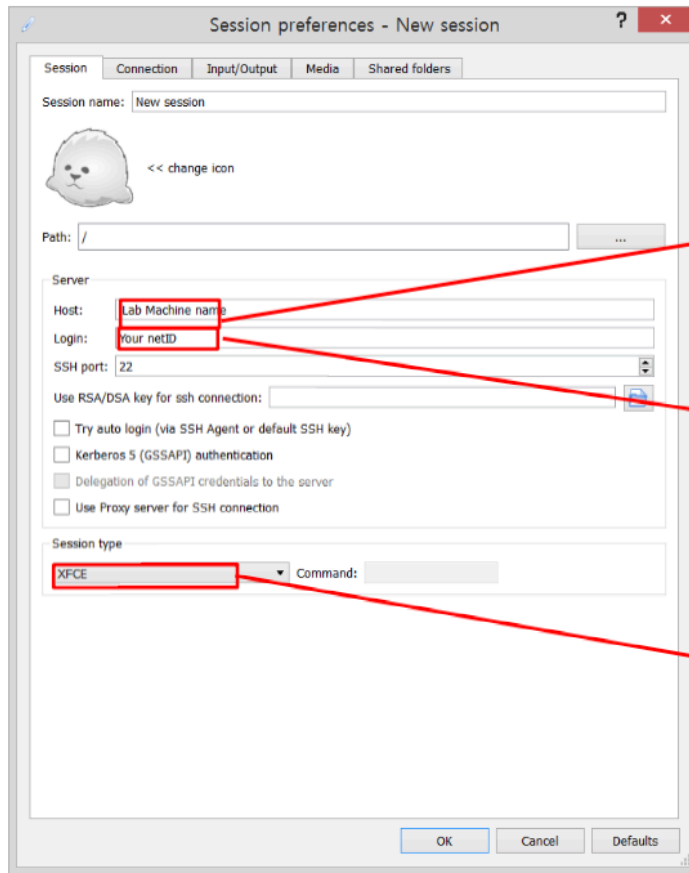
CS Computing Resources issue?
  Email details to: help@cs.rutgers.edu or go to CoRE 235

jj552@128.6.13.238's password: █
```

Guide: <https://www.howtogeek.com/311287/how-to-connect-to-an-ssh-server-from-windows-macos-or-linux/>

Connecting to iLab Machines: X2GO Remote Desktop (Windows/Mac/Linux)

- Create new session



Put any iLab machine name from <http://ilab.cs.rutgers.edu/~watrous/dcs-ilab-profile.html>

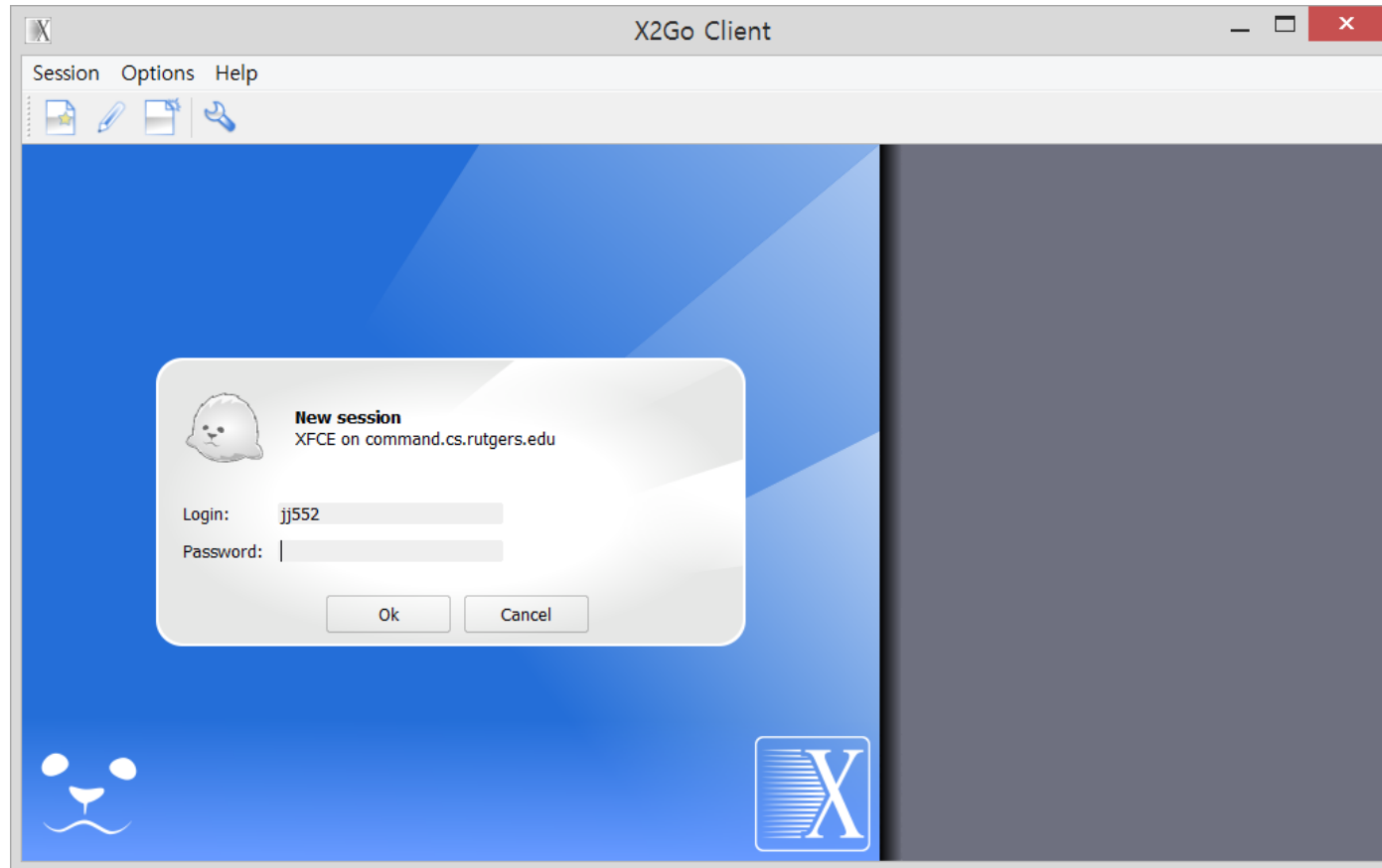
Your netID

Select one of XFCE, **MATE**, KDE

Guide: <https://resources.cs.rutgers.edu/docs/other/x2go/>

Connecting to iLab Machines: X2GO Remote Desktop (Windows/Mac/Linux)

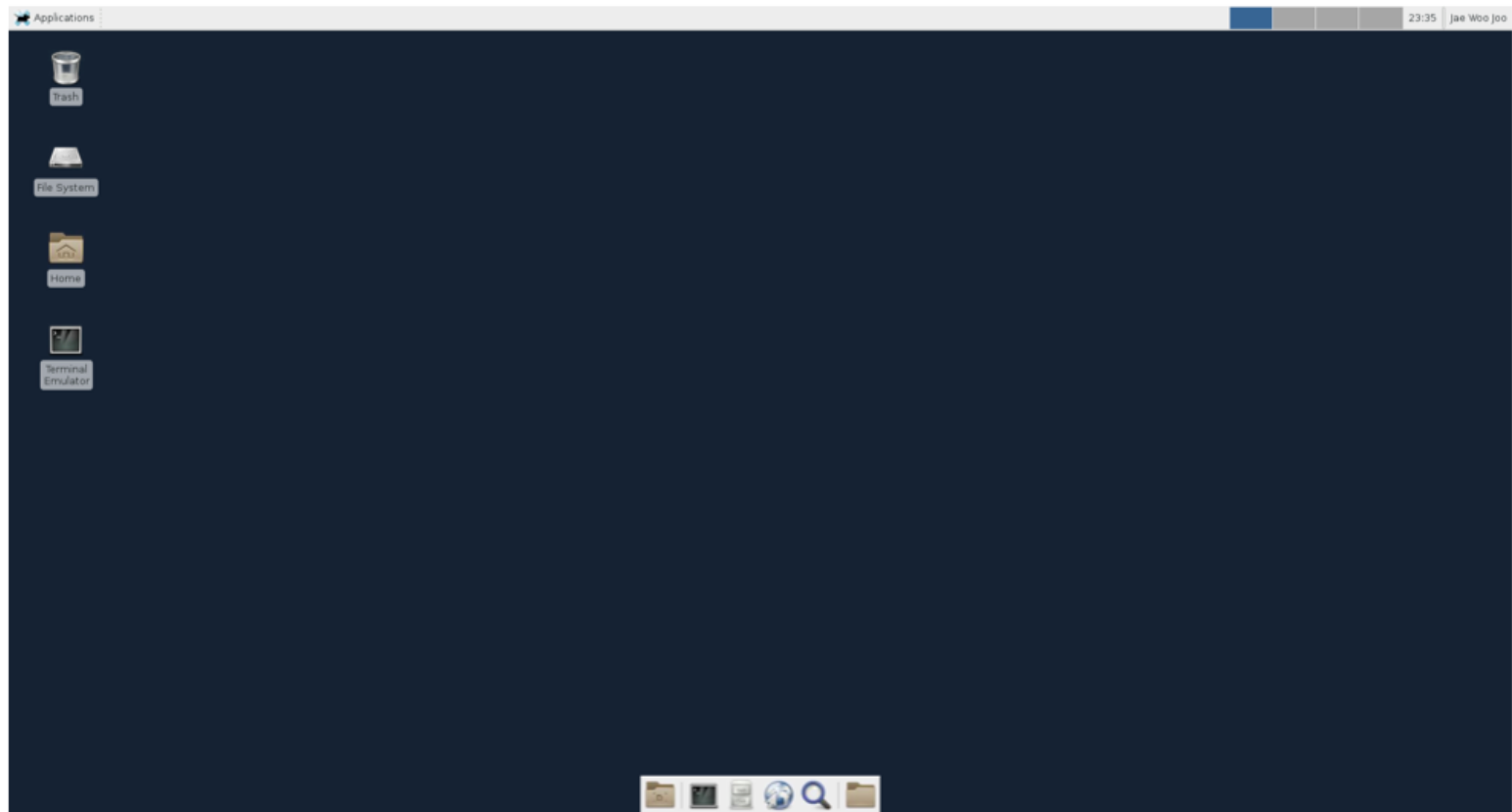
- Start session and login



Guide: <https://resources.cs.rutgers.edu/docs/other/x2go/>

Connecting to iLab Machines: X2GO Remote Desktop

- Start using Desktop Environment



Guide: <https://resources.cs.rutgers.edu/docs/other/x2go/>

Connecting to iLab Machines: Microsoft Remote Desktop (Windows/Mac/Linux)

- Necessary programs differ between systems
- Refer to guide linked below to see how to do it on your particular OS

Guide: <https://resources.cs.rutgers.edu/docs/computer-systems/windows-remote-desktop/>

Linux Shell Basics

- `pwd` : show name of current working directory
- `cd` : change directory
- `cd ..` : change to parent directory
- `ls` : list files
- `mkdir` : make a directory
- `rmdir` : remove a directory
- `touch` : create a file
- `cat` : print file contents
- `mv` : rename/move a file
- `rm` : remove a file
- `grep` : search texts in files

Special Directory Entries

- Every directory have two hidden directories:
 - “.” and “..”
- “.” refers to the current directory
- “..” refers to the parent directory
- Examples
 - `cd ..` (navigate to parent directory)
- <https://superuser.com/questions/37449/what-are-and-in-a-directory>

Linux Text Editors

- Vi / Vim
- Nano
- Gedit
- Emacs
-
- Pick anyone you would like

Vim Tutorial: <https://linuxconfig.org/vim-tutorial>

Nano Beginners Guide: <https://www.howtogeek.com/howto/42980/the-beginners-guide-to-nano-the-linux-command-line-text-editor/>

Transferring Files Between iLab and Local Machine

- Naïve way: Email files to yourself
- via scp (secure copy) on Mac/Linux
 - SCP tutorial: <https://kb.iu.edu/d/agye>
 - Examples:
 - (To iLab machine)
scp localfile.txt djd240@ilab.cs.rutgers.edu:folder/file.txt
 - (From iLab machine)
scp djd240@ilab.cs.rutgers.edu:folder/remotefile.txt file.txt
- via pscp (PuTTY secure copy) on Windows
 - pscp tutorial: <https://www.ssh.com/ssh/putty/putty-manuals/0.68/Chapter5.html>
 - Examples:
 - (To iLab machine)
pscp localfile.txt djd240@ilab.cs.rutgers.edu:folder/file.txt
 - (From iLab machine)
pscp djd240@ilab.cs.rutgers.edu:folder/remotefile.txt file.txt
- via SFTP client
 - drop and drag files between machines via GUI
 - WINSCP (Windows) <https://winscp.net/eng/index.php>
 - FileZilla Client (Windows/Mac/Linux) <https://filezilla-project.org/>