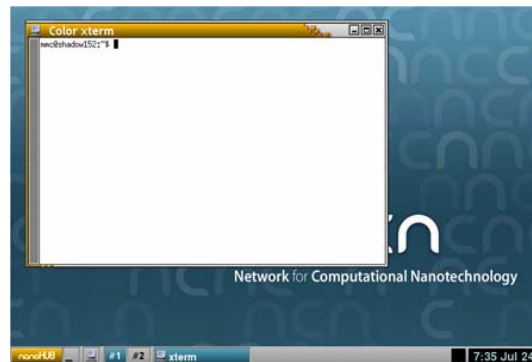
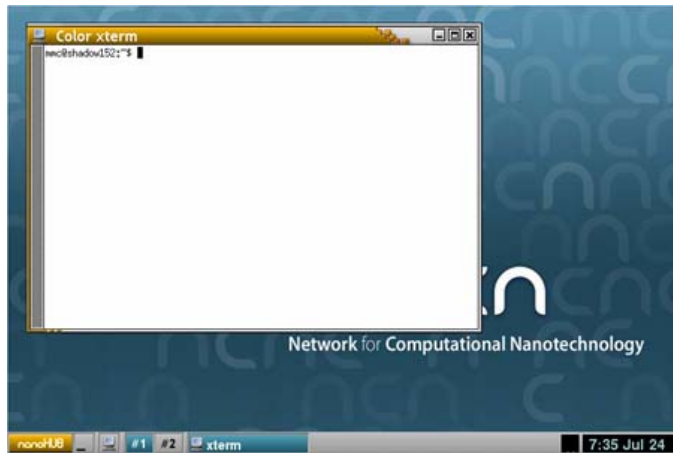


Using workspaces on nanoHUB.org

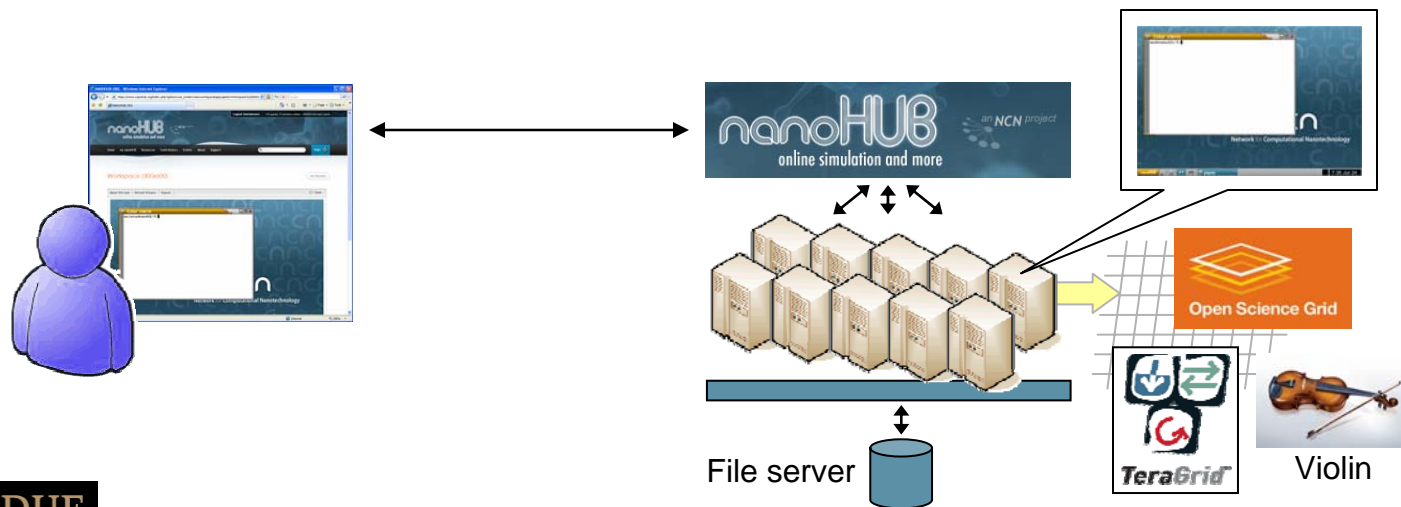


Michael McLennan
Software Architect
Network for Computational Nanotechnology

What is a workspace?



- Full-featured Linux desktop
- For tool developers
- For researchers
- Accessible from any web browser
- Still running after you close your browser
- Access to Grid resources
- File storage provided by nanoHUB



Requesting workspace access

- Given automatically to tool developers

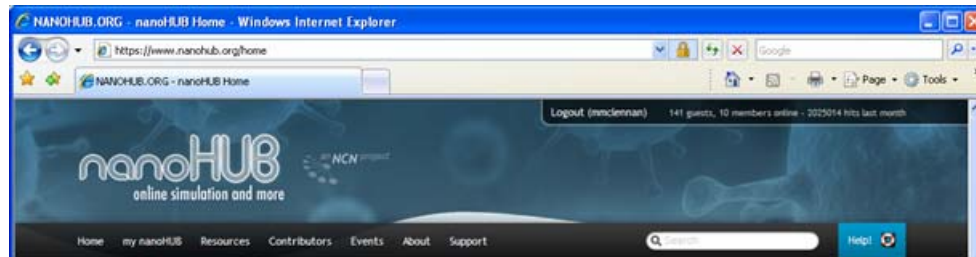
The image displays two overlapping browser windows from Windows Internet Explorer. The left window shows the nanoHUB 'Contribute' page. A red circle highlights the 'Start a contribution' button. The right window shows the 'Simulation Tool' registration form. The form includes the following fields:

- Tool Name:** shortname (Short name, used for the directory containing this tool. Example: qdot)
- Title:** Full Tool Name (Full name for this tool. Example: Quantum Dot Lab)
- Version:** X.X (Optional version number for this release of the tool. Example: 1.0 or 2.1.5b)
- At-a-glance Description:** Tool Description (A one-line description of your tool. Example: Simulate 3-D confined states in simple quantum dot geometries.)
- Tool Access:** - Select access level -
- Source Code Access:** - Select access level -
- Development team:** mmclennan (nanoHUB logins for people allowed to modify your code. Example: mylogin, fred, barney, wilma)

A 'Register Tool' button is located at the bottom of the form. To the right of the form, there is a section titled 'How do I contribute a simulation tool?' with a link to a demo and instructions on tool naming.

Requesting workspace access

- Given to others on a case-by-case basis



Give us a good reason:

- How are you affiliated with NCN?
- What are you doing?

Trouble Report

For immediate assistance browse through our support center. You can find answers to many questions in just a few minutes.

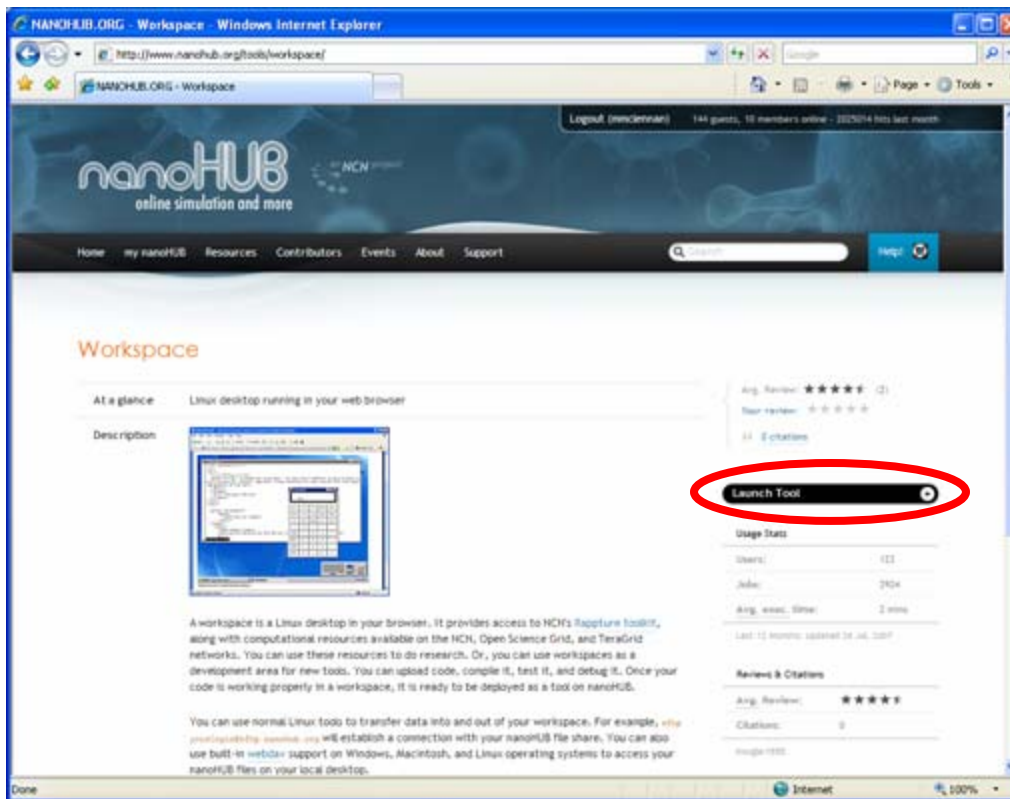
If still experiencing problems, send us a report.

nanoHUB login: OPTIONAL	Problem: REQUIRED
<input type="text" value="mmclennan"/>	<input type="text" value="I'm an NCN researcher working with Prof. Datta. I need workspace access to launch simulations of a NEGF code."/>
Name: REQUIRED	
<input type="text" value="Michael McLennan"/>	
E-mail: REQUIRED	
<input type="text" value="mmclennan@purdue.edu"/>	

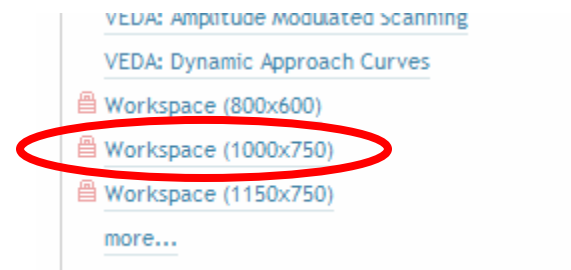
MEMS/Nanofabrication Tools for MEMS and Nanofabrication Collaborate Work with your colleagues Nanoelectronics Curriculum on Nanoelectronics Give us Feedback Success story! Suggestions!
Nano-bio Tools for nano-bio Web Meetings Right in your browser Learning Modules Self-paced web instruction Take a Poll Compared to other web sites!

Launching workspaces

<http://www.nanohub.org/tools/workspace>



“my tools” list on
“my nanoHUB” page



Accessing running workspaces

Close the browser

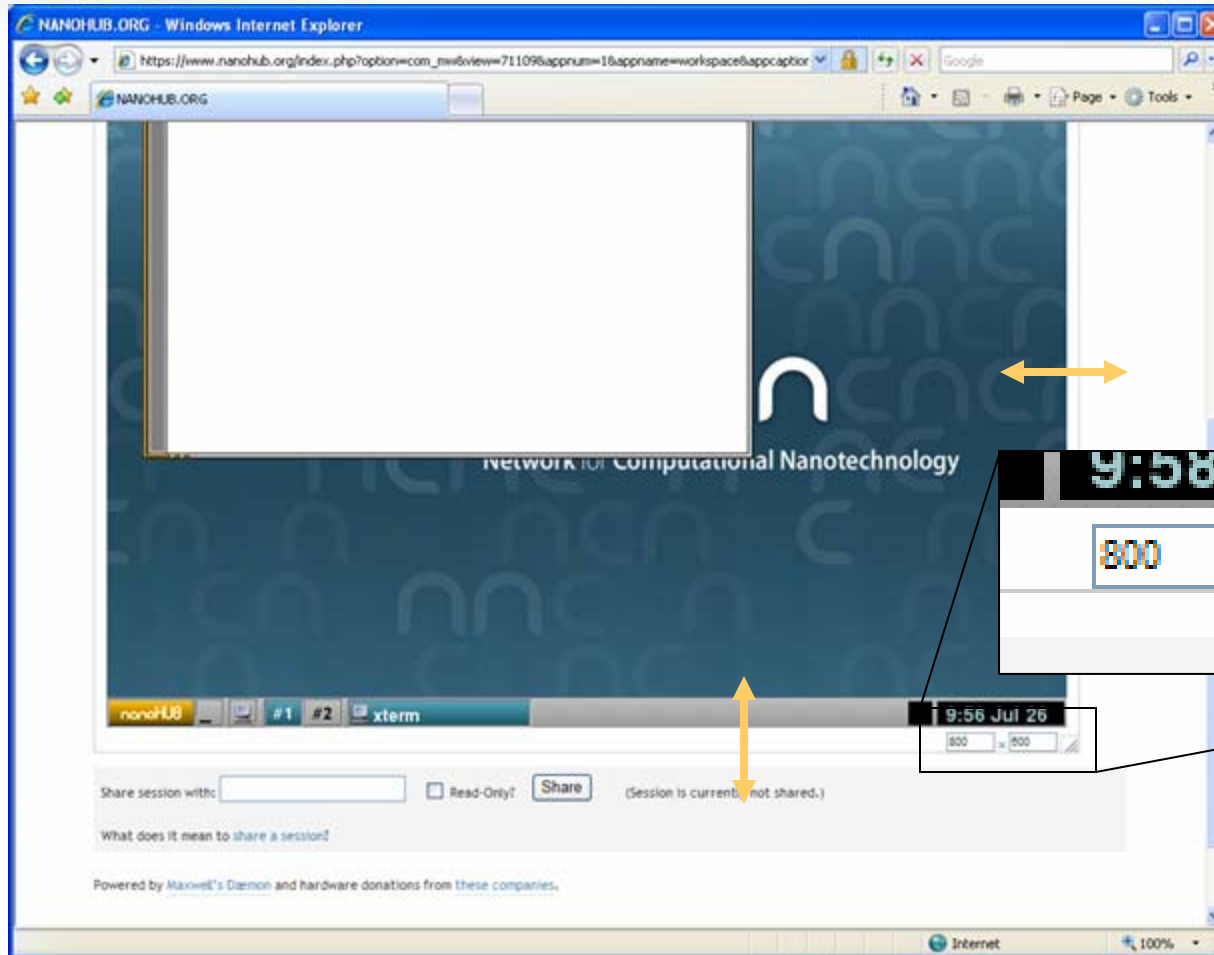
Still running, and listed under "my sessions"

Closing workspaces

The image displays two screenshots of the nanoHUB website. The left screenshot shows a workspace titled "Workspace (800x600)" with a "Color xterm" window. A large red "X" is overlaid on the workspace, indicating it is closed. The right screenshot shows the "My nanoHUB" dashboard for a user named Michael McLennan. A red circle highlights a button in the "My Sessions" section, and a red arrow points from the text "Closes the session" to this button. The dashboard also includes sections for "My Tools", "My Settings", "Resources", and "Polls".

Closes the session

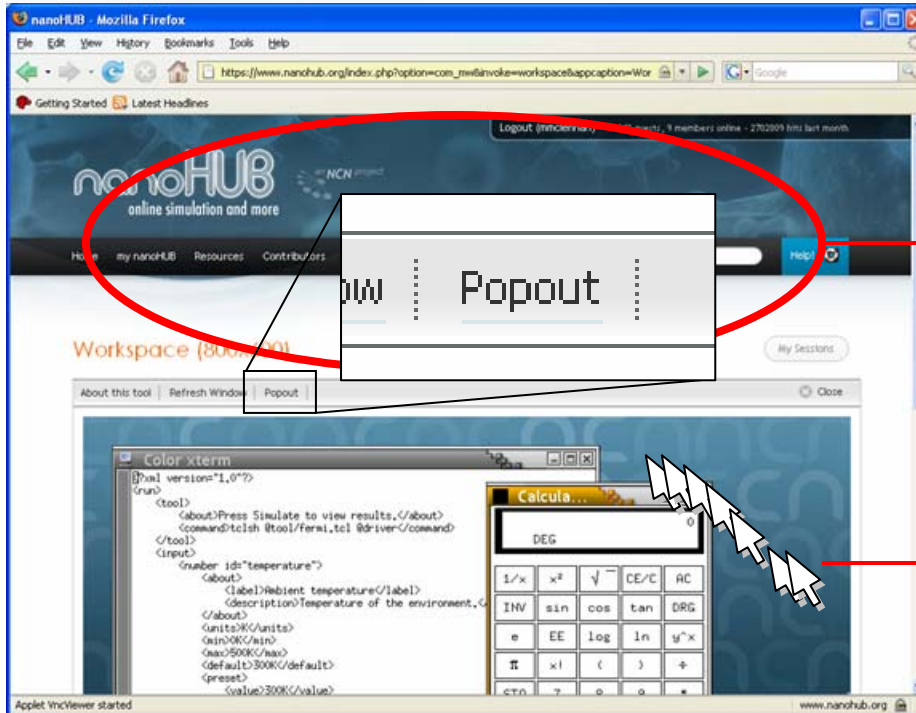
Resize the screen



Click and drag

Type in a new size
Press Tab

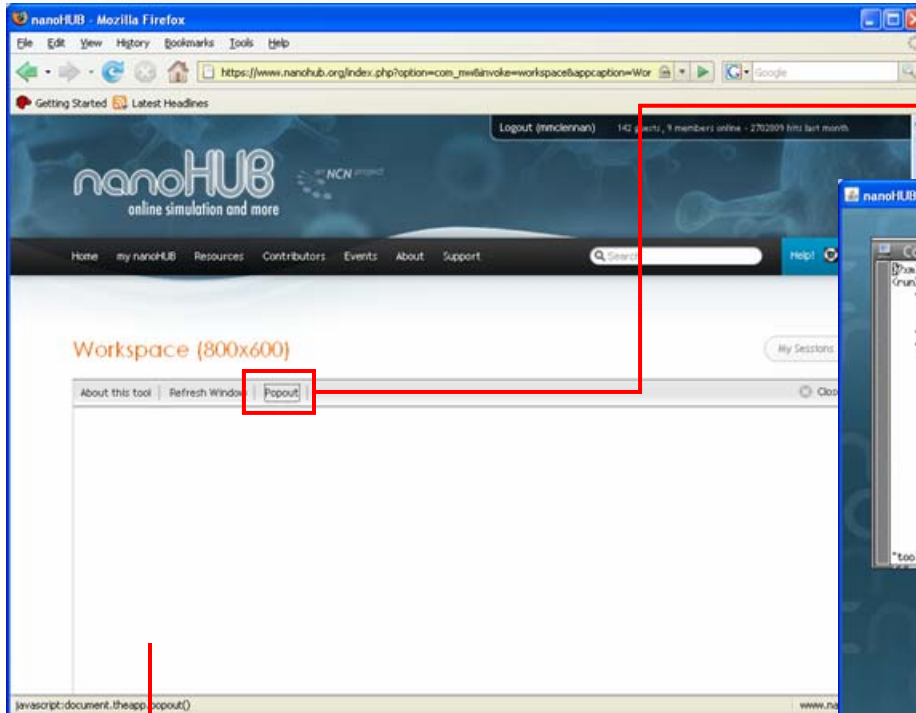
Pop out as a separate window



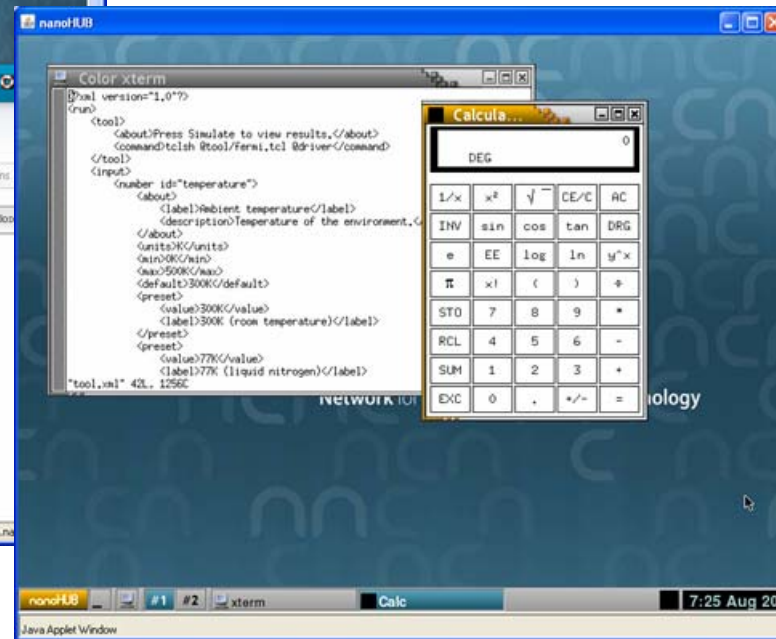
Get rid of this header and see more of the workspace

Solve problem of mouse trails e.g., MacOSX/Firefox

Pop out as a separate window

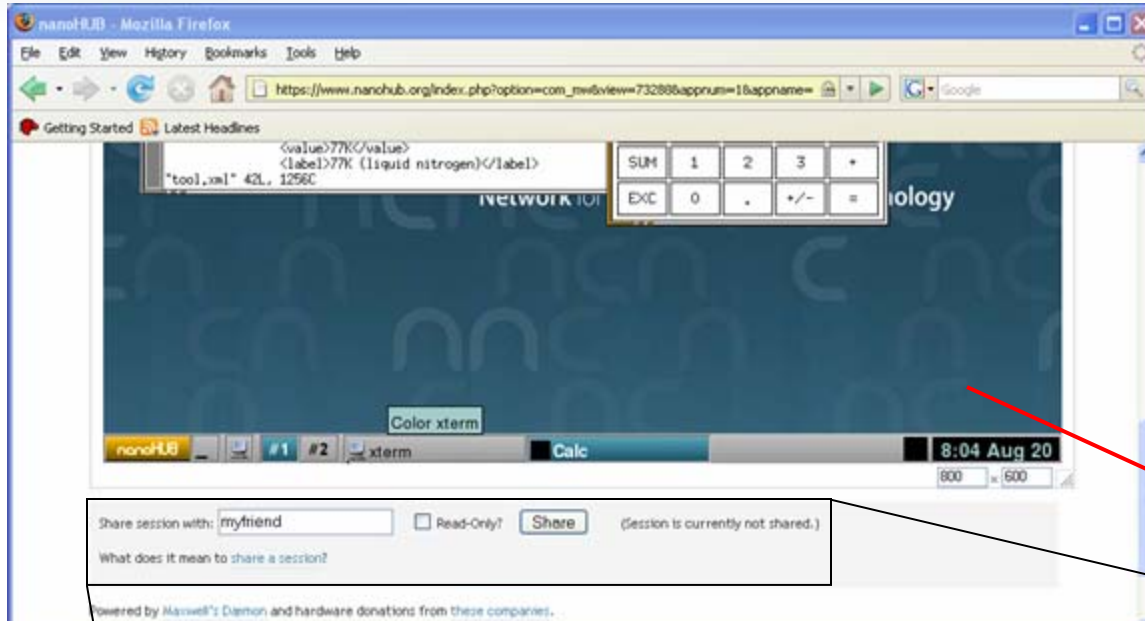


Click Popout again to pop back in



This area goes blank.
Closing this window also closes the popup.

Share your screen



My Sessions

Workspace (800x600)
owner: mmclennan



myfriend

See same
screen at
same time

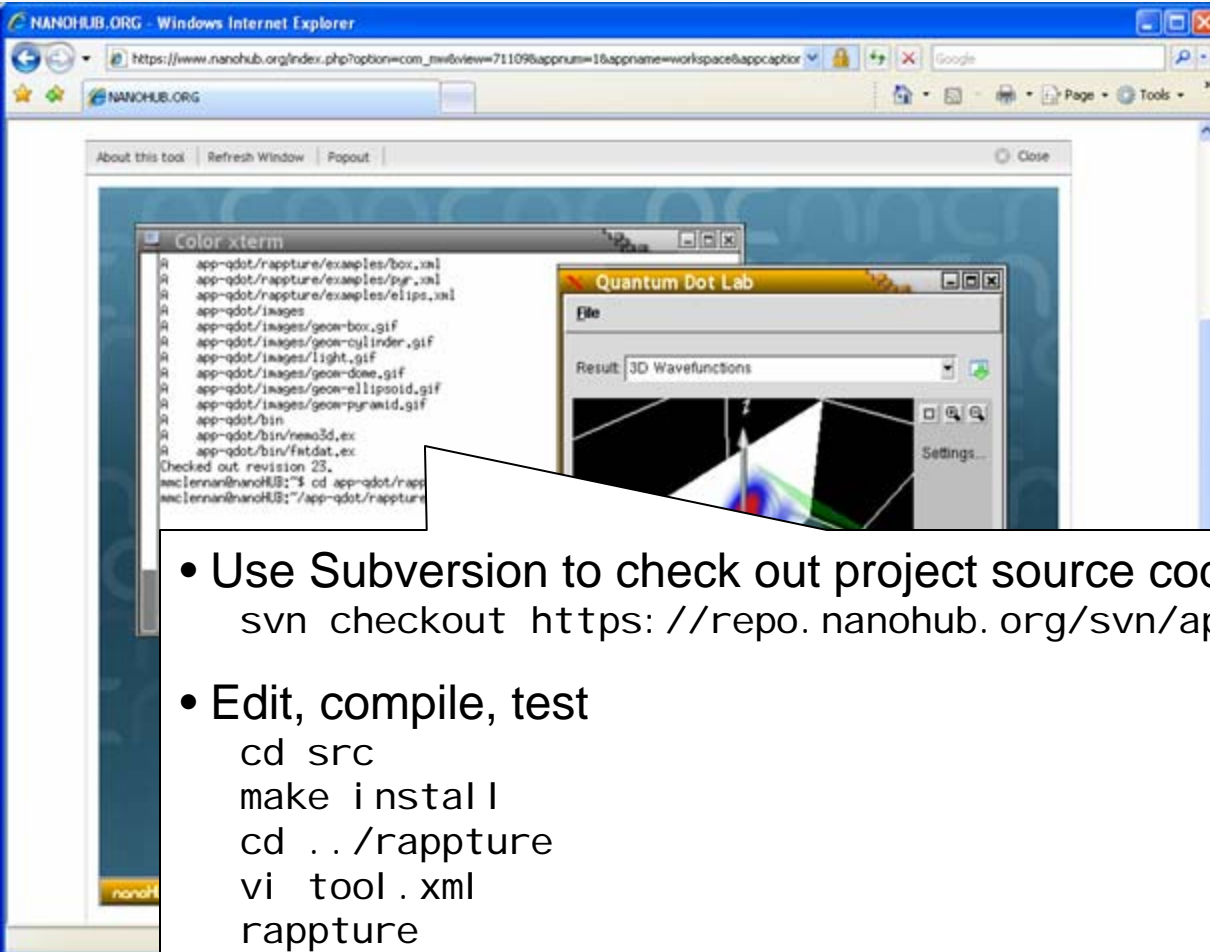
Share session with: Read-Only? (Session is currently not shared.)
What does it mean to share a session?

Share session with: Read-Only? (Session is currently not shared.)
What does it mean to [share a session?](#)

Enter the login
for your friend

Check this if you don't
want to share control

```
xterm
mmclennan@nanoHUB:~$ cat > /dev/null
Hi there! Take a look at this...
```



Color xterm

```
app-qdot/rappture/examples/box.xml
app-qdot/rappture/examples/pyr.xml
app-qdot/rappture/examples/ellips.xml
app-qdot/images
app-qdot/images/geom-box.gif
app-qdot/images/geom-cylinder.gif
app-qdot/images/light.gif
app-qdot/images/geom-dome.gif
app-qdot/images/geom-ellipsoid.gif
app-qdot/images/geom-pyramid.gif
app-qdot/bin
app-qdot/bin/new3d.exe
app-qdot/bin/fatdat.exe
Checked out revision 23.
ncclernan@nanohub:~$ cd app-qdot/rap
ncclernan@nanohub:~/app-qdot/rap
```

Quantum Dot Lab

File

Result: 3D Wavefunctions

Settings...

- Use Subversion to check out project source code
svn checkout <https://repo.nanohub.org/svn/app-qdot/trunk> app-qdot
- Edit, compile, test
cd src
make install
cd ../rappture
vi tool.xml
rappture

See instructions:

- in your project area
at [wiki/GettingStarted](http://wiki.nanohub.org/GettingStarted)
- [Subversion tutorial](#)
- [Rappture tutorial](#)

Downloading Files

The screenshot shows a Windows Internet Explorer browser window displaying the nanoHUB website. Several download windows are open, showing XML code for downloading files. The code includes tags like `<label>Cylinder</label>`, `<label>Pyramid</label>`, and `<label>Tool</label>`. A callout box points to the download links.

- Easy way to download files:
`exportfile tool.xml`
`exportfile examples/*`

Uploading files

The screenshot shows two browser windows. The left window displays a terminal session with the following output:

```

ncleannan@nanoHUB:~/app-qdot/rapture$ ls -l
total 52
drwxr-xr-x 3 ncleannan public 4096 Jul 26 22:10 data
drwxr-xr-x 3 ncleannan public 4096 Jul 26 22:10 examples
-rw-r--r-- 1 ncleannan public 29060 Jul 26 22:10 qdot.r
-rw-r--r-- 1 ncleannan public 11895 Jul 26 22:10 tool.xml
ncleannan@nanoHUB:~/app-qdot/rapture$
    
```

The right window shows the 'Upload' page with the following form:

File src.tgz:

Upload a file Copy/paste text

A 'Choose file' dialog box is open, showing a file explorer view of the 'Images' folder. The file list includes:

- BandStructure
- Circuits
- Collaboration
- Desktop
- For Web
- Lego SPM
- NCN
- NEMS
- QuantumDot
- Team
- TeraGrid video
- Tools
- 20060103corp
- breeze
- capacitytime
- critbands
- critbands-small
- computingcapacity
- creativecommons-2.5
- cvd-process
- cyberinfrastructure
- cyberinfrastructure
- cyberinfrastructure
- cyberinfrastructure-raw
- dna
- gennano2
- gennano3
- gennano4
- groups
- groups-raw
- hpweblogo
- hub0 for ppt
- hubzero
- hubzero
- hubzero
- hubzero-all
- img_0272
- twice
- twice-python
- lecture-head
- mission-nano
- msl-crit
- nanoHUB
- nanoHUB

• Easy way to upload files:
importfile src.tgz

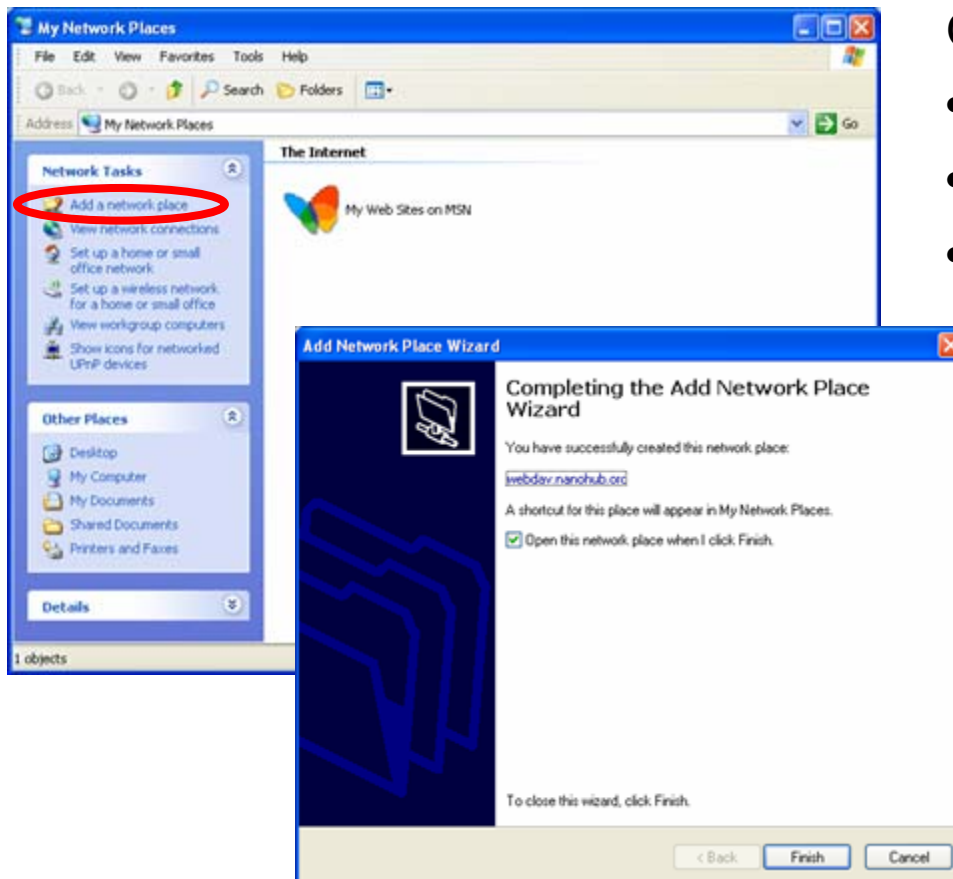
Uploading files

The image shows two overlapping browser windows from Internet Explorer. The left window displays the nanoHUB homepage with a terminal window titled 'Color xterm' open. The terminal shows the output of a 'ls -l' command in the directory '/app-qdot/rapptures', listing files like 'data', 'examples', 'qdot.r', and 'tool.xml'. The right window shows the 'Upload' page, which has a form for uploading files. It includes two sections: 'File mesh.dat' and 'File doping.dat', each with radio buttons for 'Upload a file' (selected) and 'Copy/paste text', and a 'Browse...' button. An 'Upload' button is at the bottom of the form.

- Easy way to upload files:
importfile src.tgz
importfile mesh.dat doping.dat

Using webdav to access files

Browse your nanoHUB files on any Windows, Macintosh, or Linux desktop

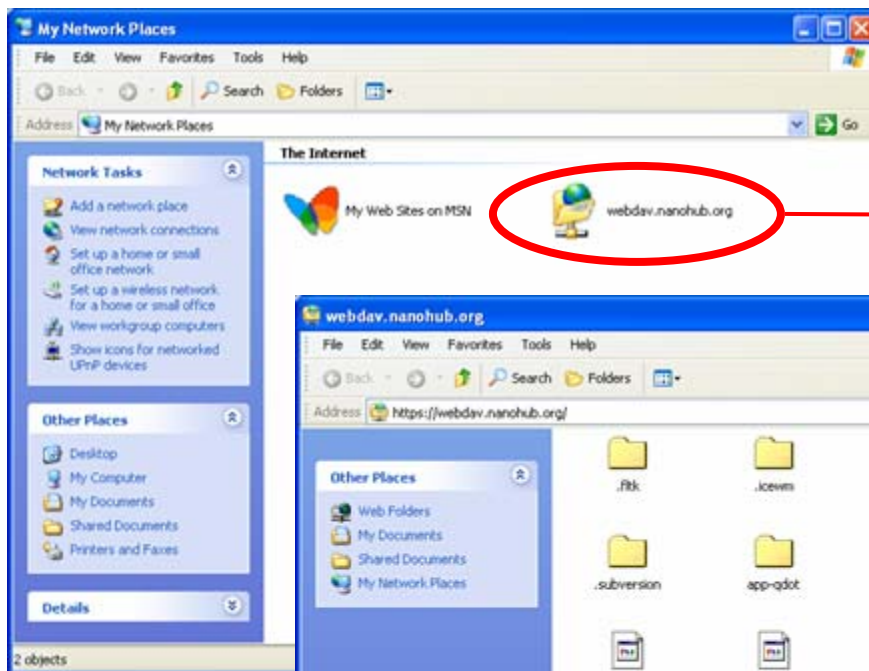


On Microsoft Windows:

- Go to *My Network Places*
- Click *Add a network place*
- Internet or network address:
`https://webdav.nanohub.org`

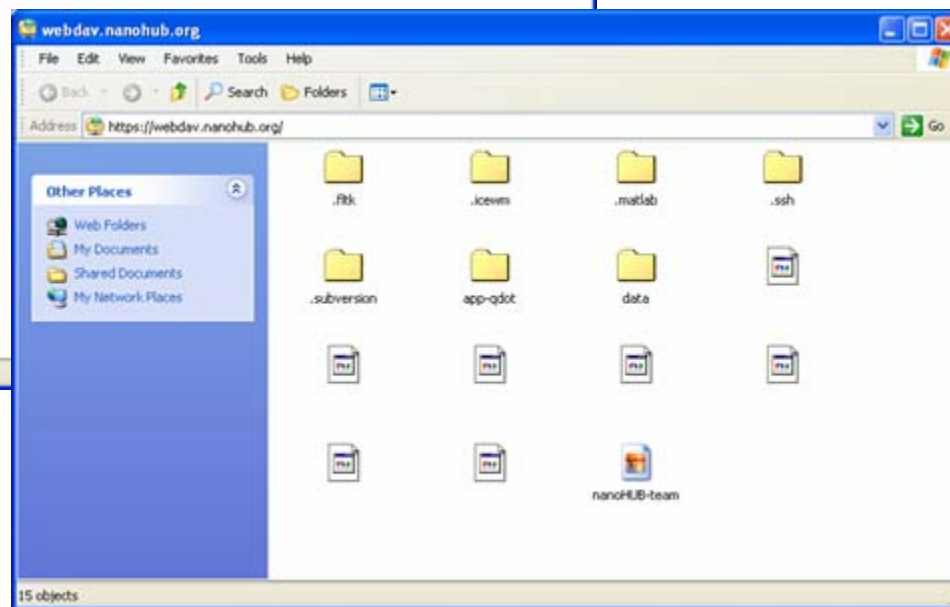
Using webdav to access files

Browse your nanoHUB files on any Windows, Macintosh, or Linux desktop



See [this page](#) on nanoHUB for instructions on other platforms

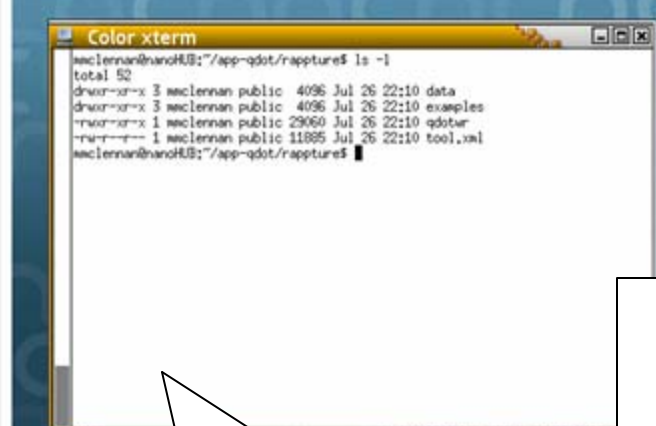
Next time, use this shortcut



Drag files in and out



Using sftp to access files

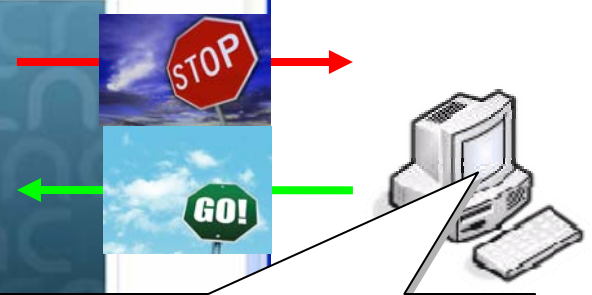


```
mmclennan@nanoHUB:~/app-qdot/rappture$ ls -l
total 52
drwxr-xr-x 3 mmclennan public 4096 Jul 26 22:10 data
drwxr-xr-x 3 mmclennan public 4096 Jul 26 22:10 examples
-rw-r--r-- 1 mmclennan public 29060 Jul 26 22:10 qdot.r
-rw-r--r-- 1 mmclennan public 11885 Jul 26 22:10 tool.xml
mmclennan@nanoHUB:~/app-qdot/rappture$
```

Color xterm

Network for Computa

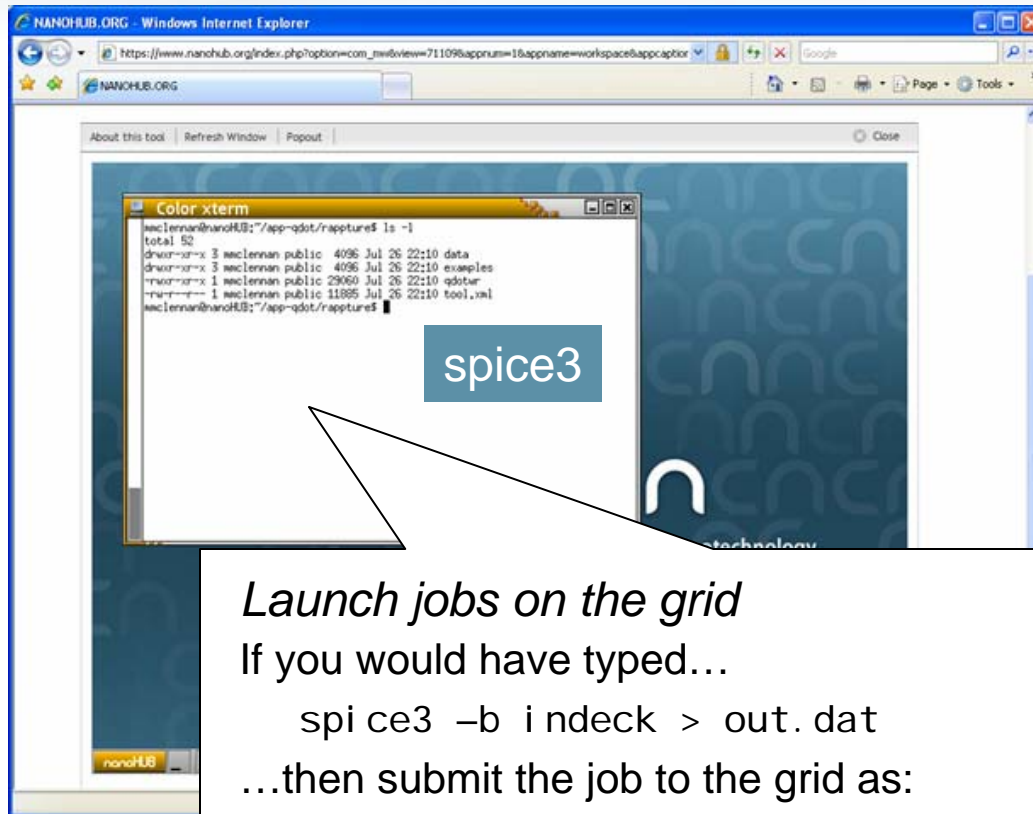
nanoHUB #1 #2 xterm 10:22 Jul 26



sftp mmclennan@sftp.nanohub.org
your nanoHUB login

sftp ~~mmc~~@mmc.rcac.purdue.edu

Accessing the grid



Violin

Launch jobs on the grid

If you would have typed...

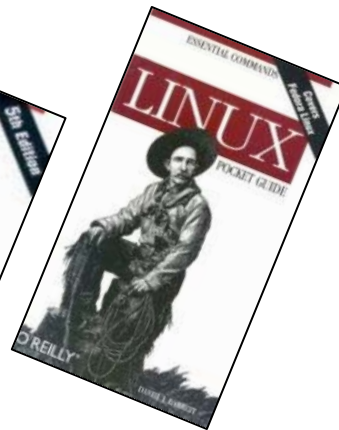
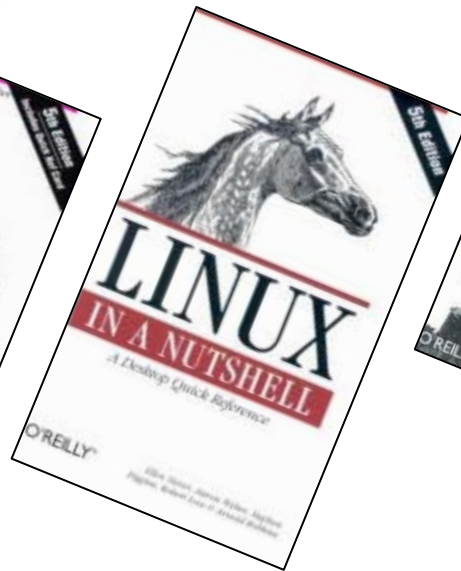
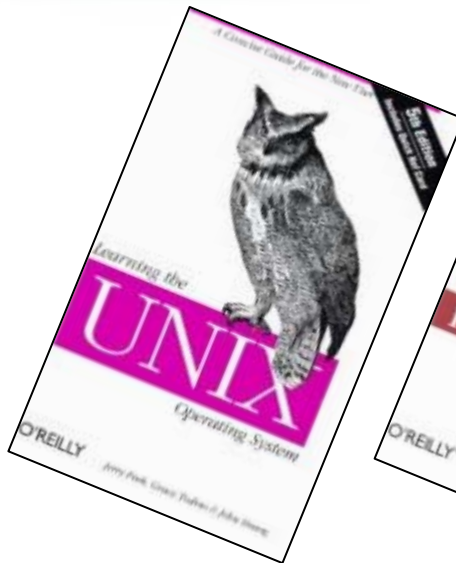
```
spi ce3 -b i ndeck > out. dat
```

...then submit the job to the grid as:

```
submi t spi ce3 -b i ndeck > out. dat
```

```
submi t --venue haml et spi ce3 -b i ndeck > out. dat
```

More Information



Pick an editor:

- vi
- emacs
- nano
- xedit



Linux tutorial online:

<http://www.ee.surrey.ac.uk/Teaching/Unix/>