

R Users Group - iCSF/x2go

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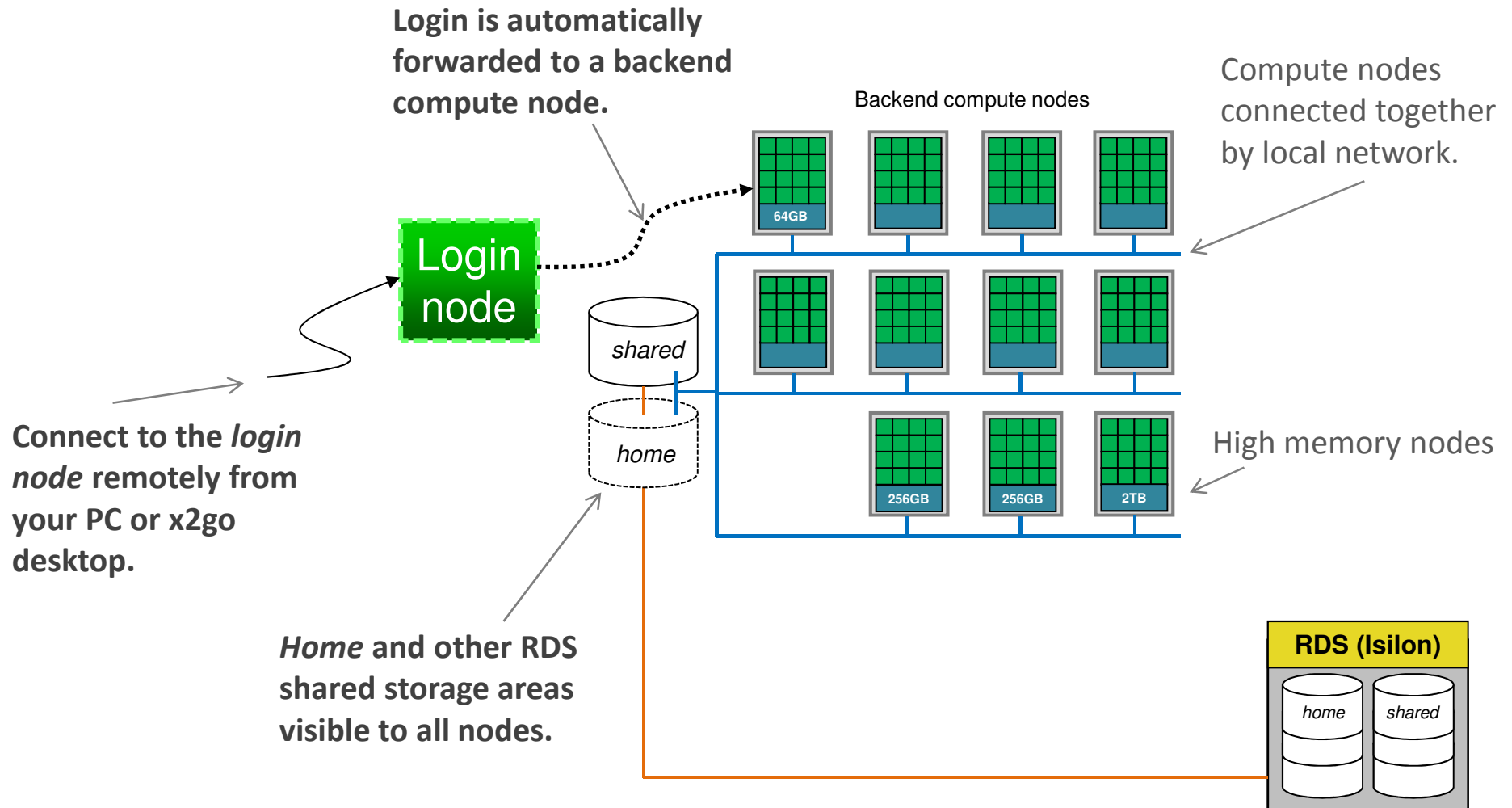
(Research Infrastructure Team, IT Services)

its-ri-team@manchester.ac.uk

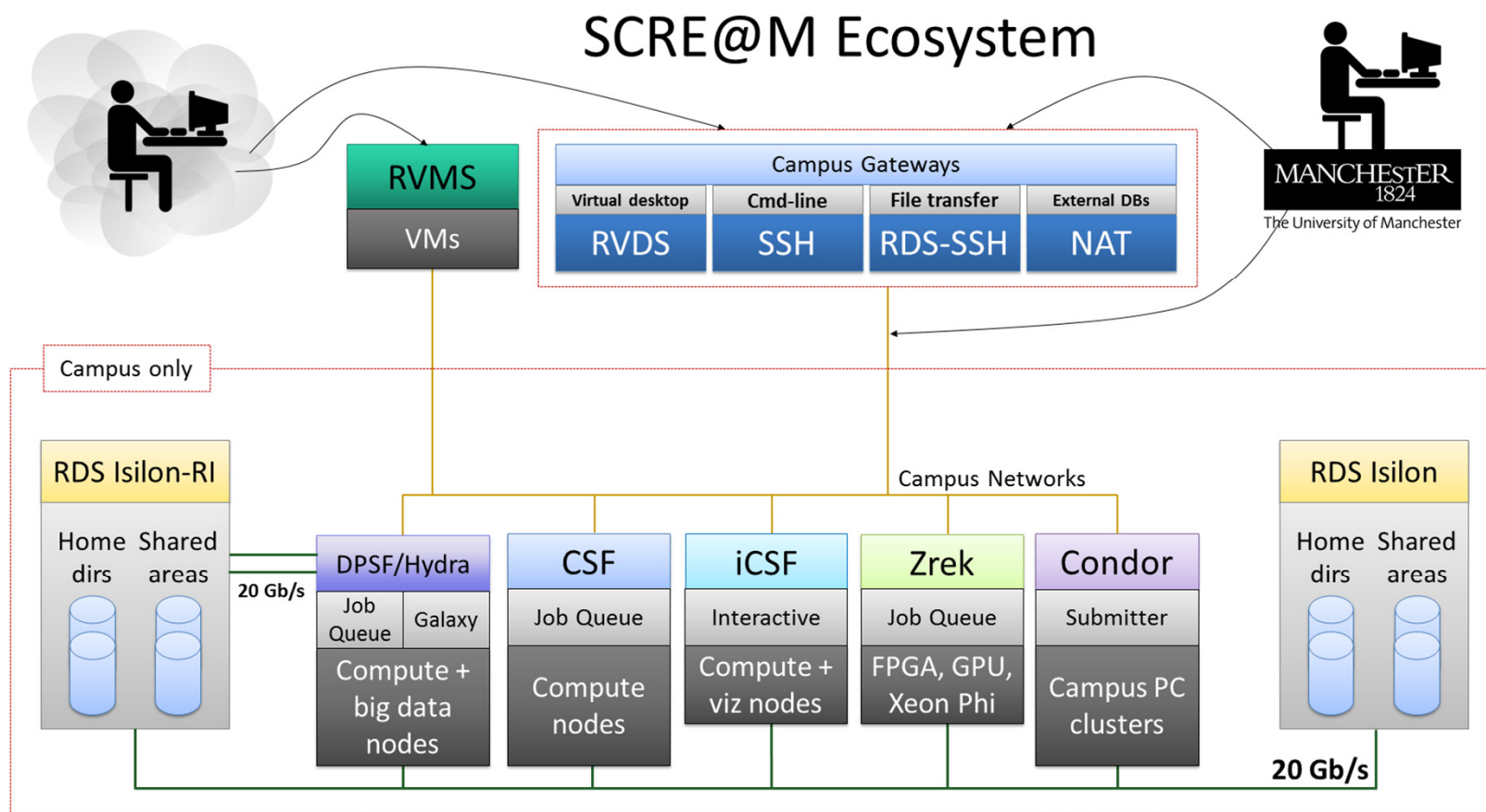
<http://ri.itservices.manchester.ac.uk/icsf/>

What is the iCSF?

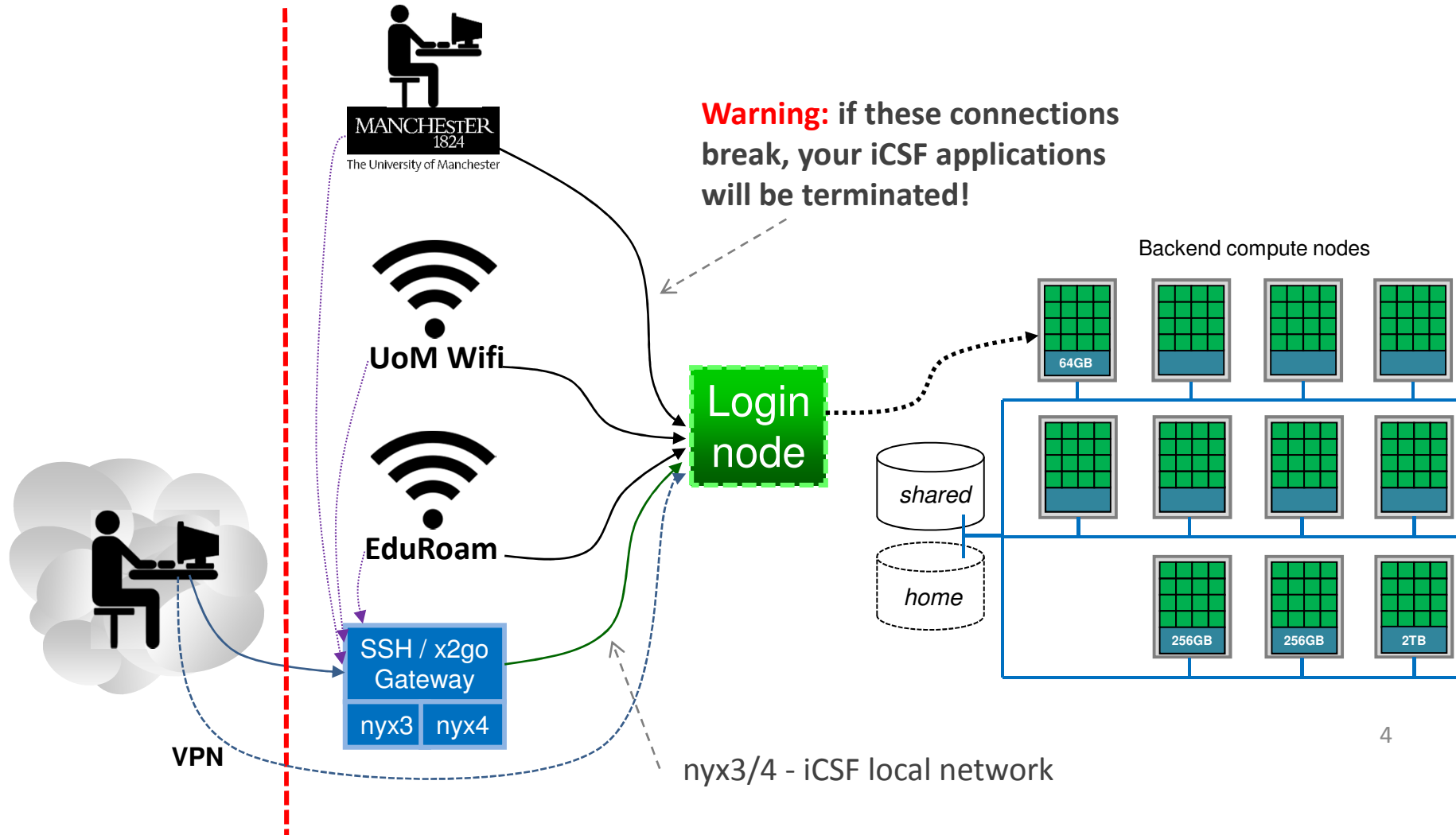
- interactive **C**omputational **S**hared **F**acility (aka incline)
- Use backend node as a (shared) linux workstation



Part of the *Computationally Intensive Research Ecosystem*



Where can I log in from?



X2GO Virtual Desktop

The screenshot displays an X2GO virtual desktop environment. The desktop background is blue and features several icons on the left side, including 'Computer', 'zzalsgw', 'Dropbox', 'X2Go Client', 'Acrobat Reader DC', 'MobaXterm...', 'Recycle Bin', 'Virtual CloneDrive', 'Remote Desktop ...', 'P-drive', 'Google Chrome', 'User Registrati...', 'VMware vSphe...', and 'Sony PC Compani...'. The taskbar at the bottom shows icons for the Start menu, Internet Explorer, File Explorer, Google Chrome, and several application windows.

The main window is titled 'nyx3 linux desktop' and contains an RStudio window and a terminal window. The RStudio window is titled 'RStudio (on incline01)' and shows a script editor with the following code:

```
1 barplot(t)
2
3
```

The Environment pane on the right shows the following values:

Variable	Class	Attributes	Values
n	num	[1:1000]	1 2 8 4 0 6 5 0 ...
t	'table'	int [1:10 (1d)]	105 90 9...

The terminal window is titled 'zzalsgw@incline01:~' and shows the following output:

```
zzalsgw@nyx3:~$ ssh -X incline.itservices.manchester.ac.uk
zzalsgw@incline.itservices.manchester.ac.uk's password:
Last login: Tue Mar 14 11:12:32 2017 from babbage.rcs.manchester.ac.uk

=====
Welcome to Incline! (aka the iCSF)

http://ri.itservices.manchester.ac.uk/icsf/

User Documentation :
http://ri.itservices.manchester.ac.uk/icsf/user-docs/

General enquiries:
its-ri-team@manchester.ac.uk

Service news and updates are posted at:
http://ri.itservices.manchester.ac.uk/services-news/

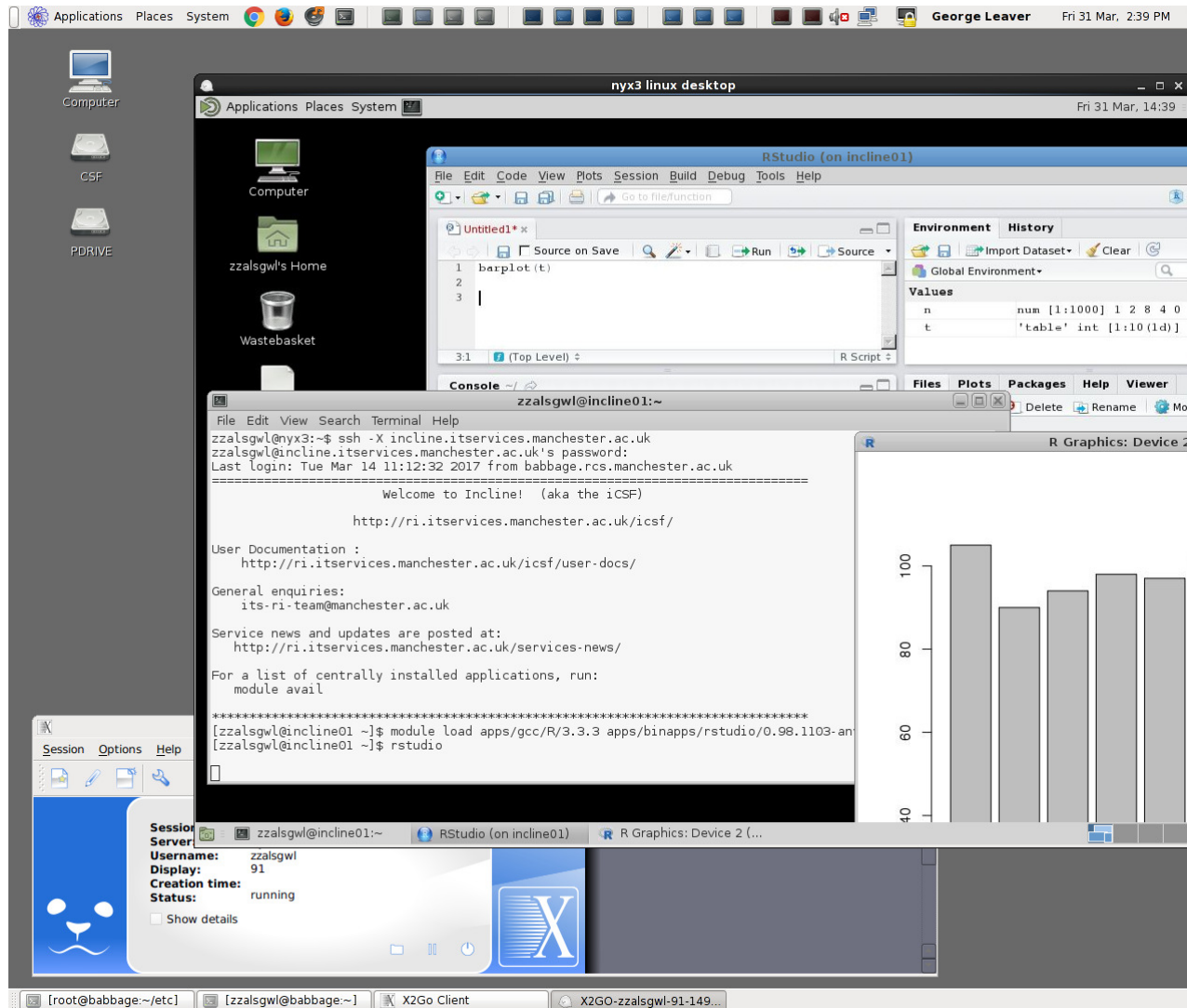
For a list of centrally installed applications, run:
module avail

*****
[zzalsgw@incline01 ~]$ module load apps/gcc/R/3.3.3 apps/binapps/rstudio/0.98.1103-an
[zzalsgw@incline01 ~]$ rstudio
```

The R Graphics window shows a bar chart with the following data:

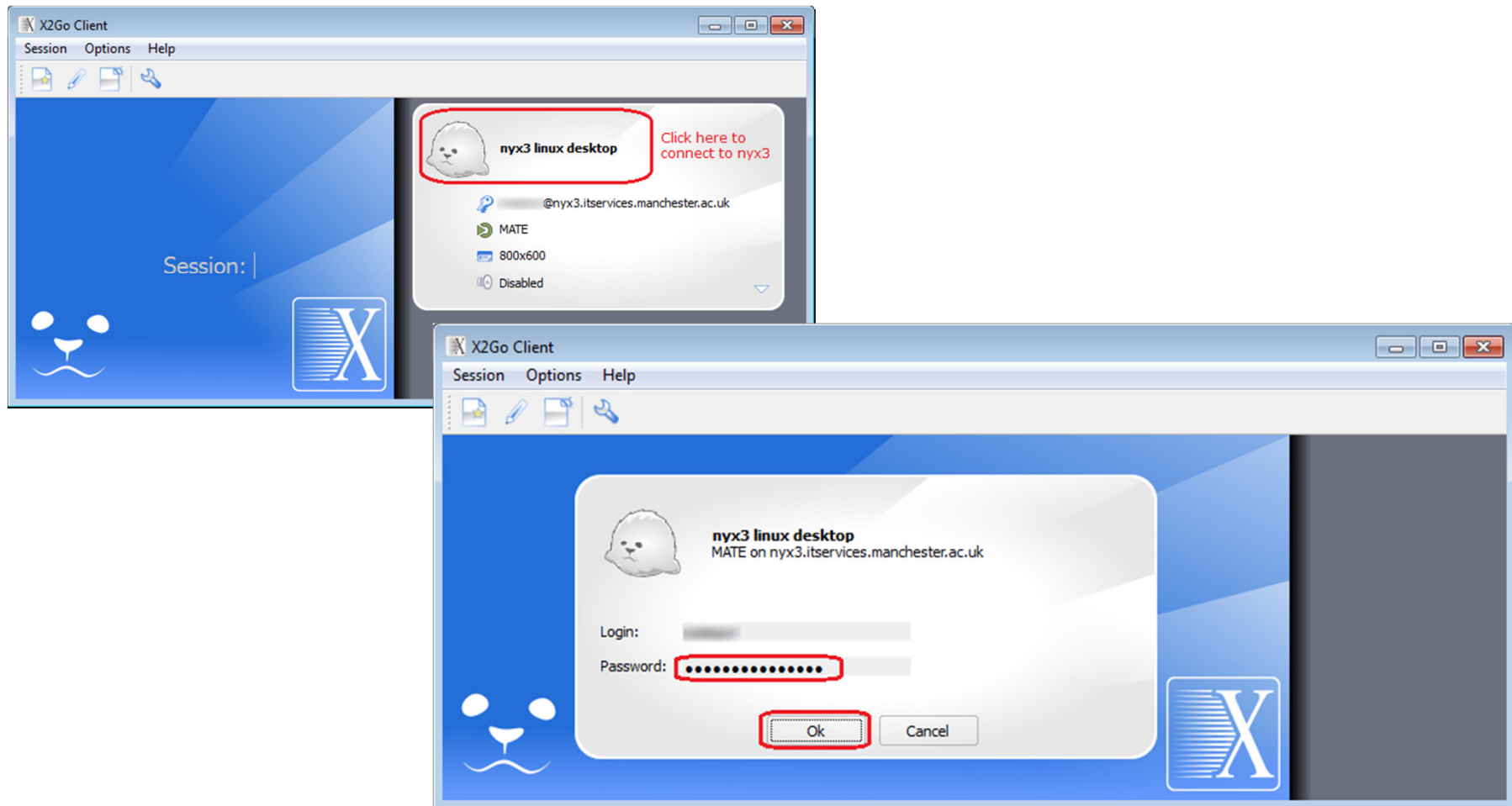
Category	Value
1	105
2	90
3	90
4	90
5	90
6	90
7	90
8	90
9	90
10	90

X2GO Virtual Desktop

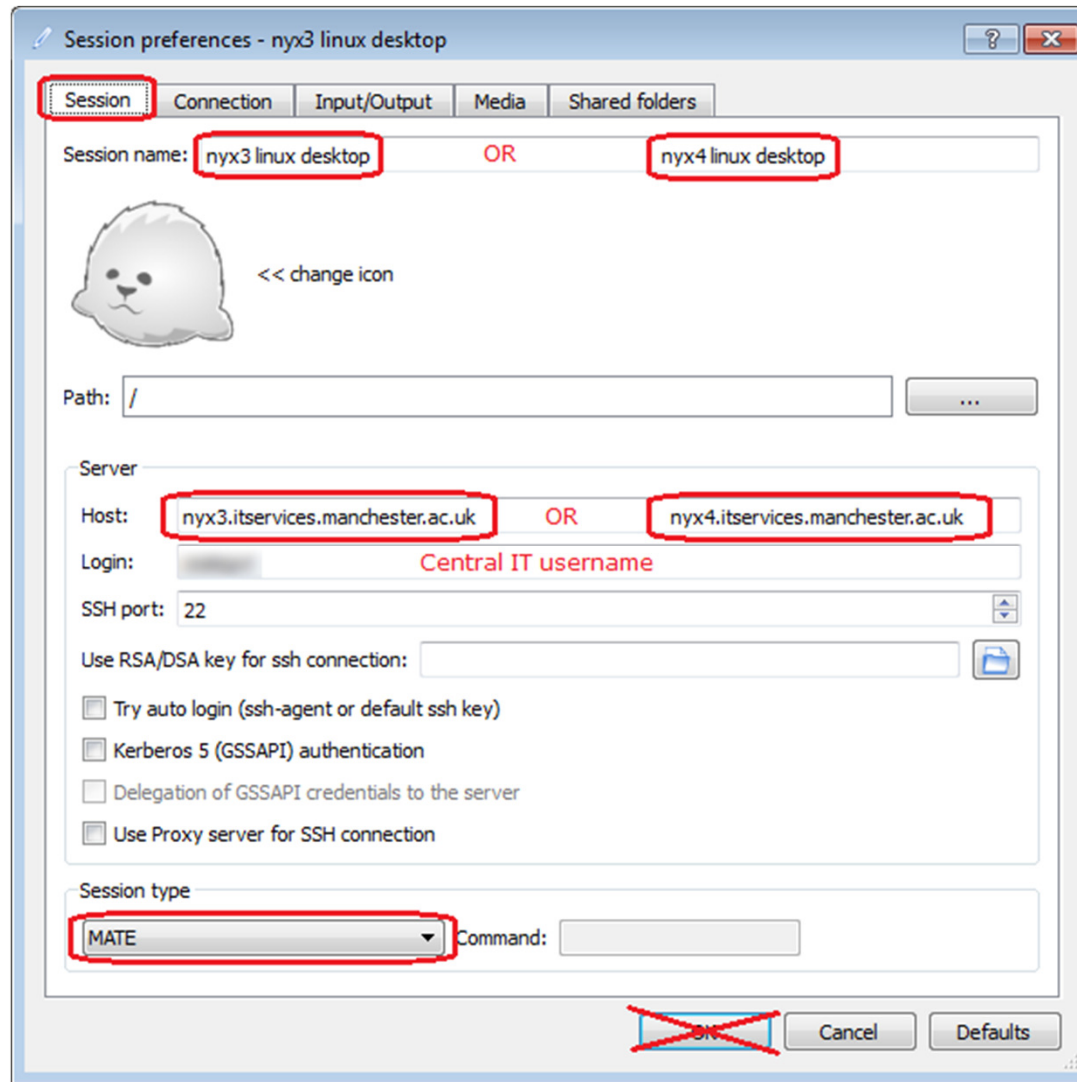


X2GO Login

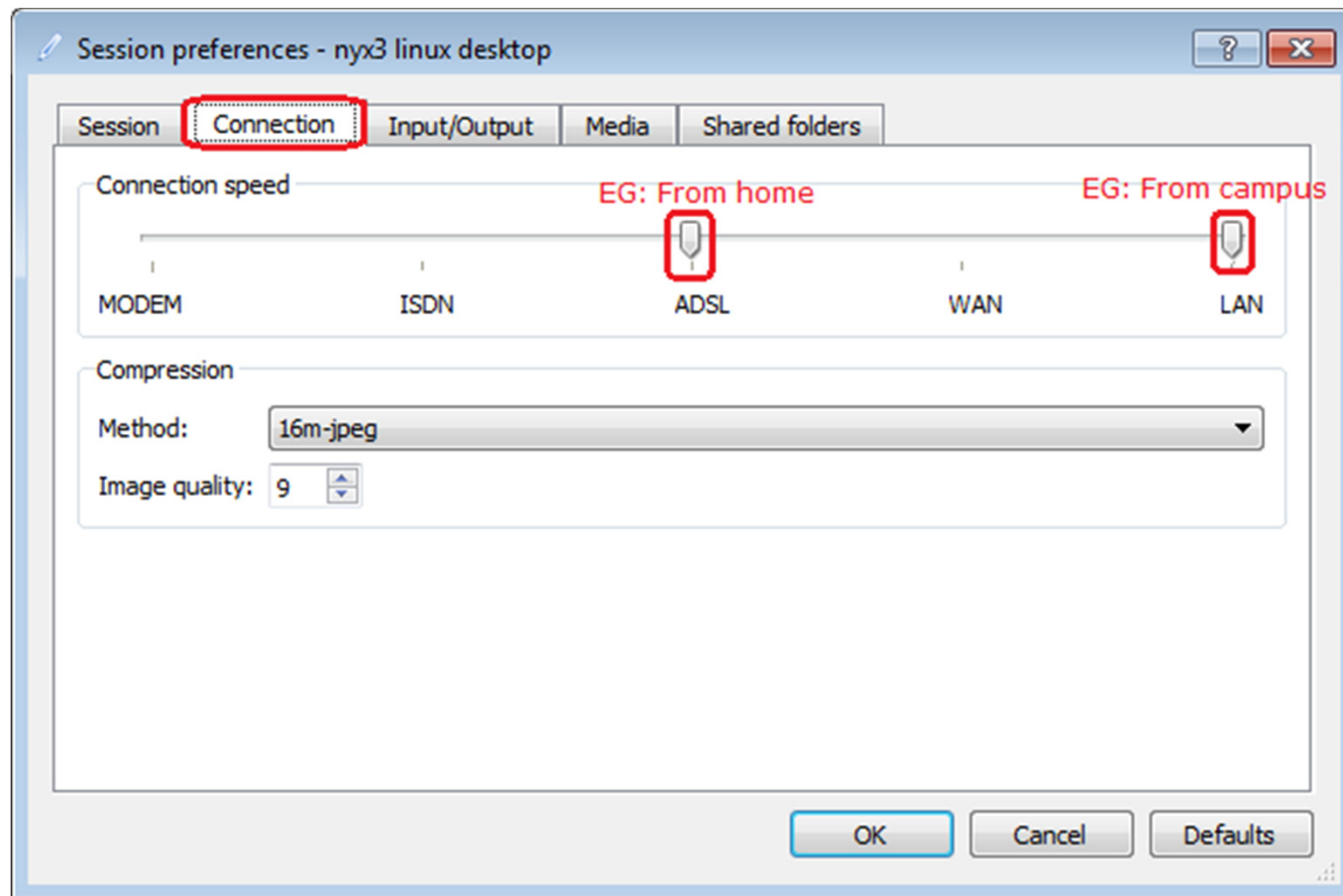
- <http://ri.itservices.manchester.ac.uk/x2go/>



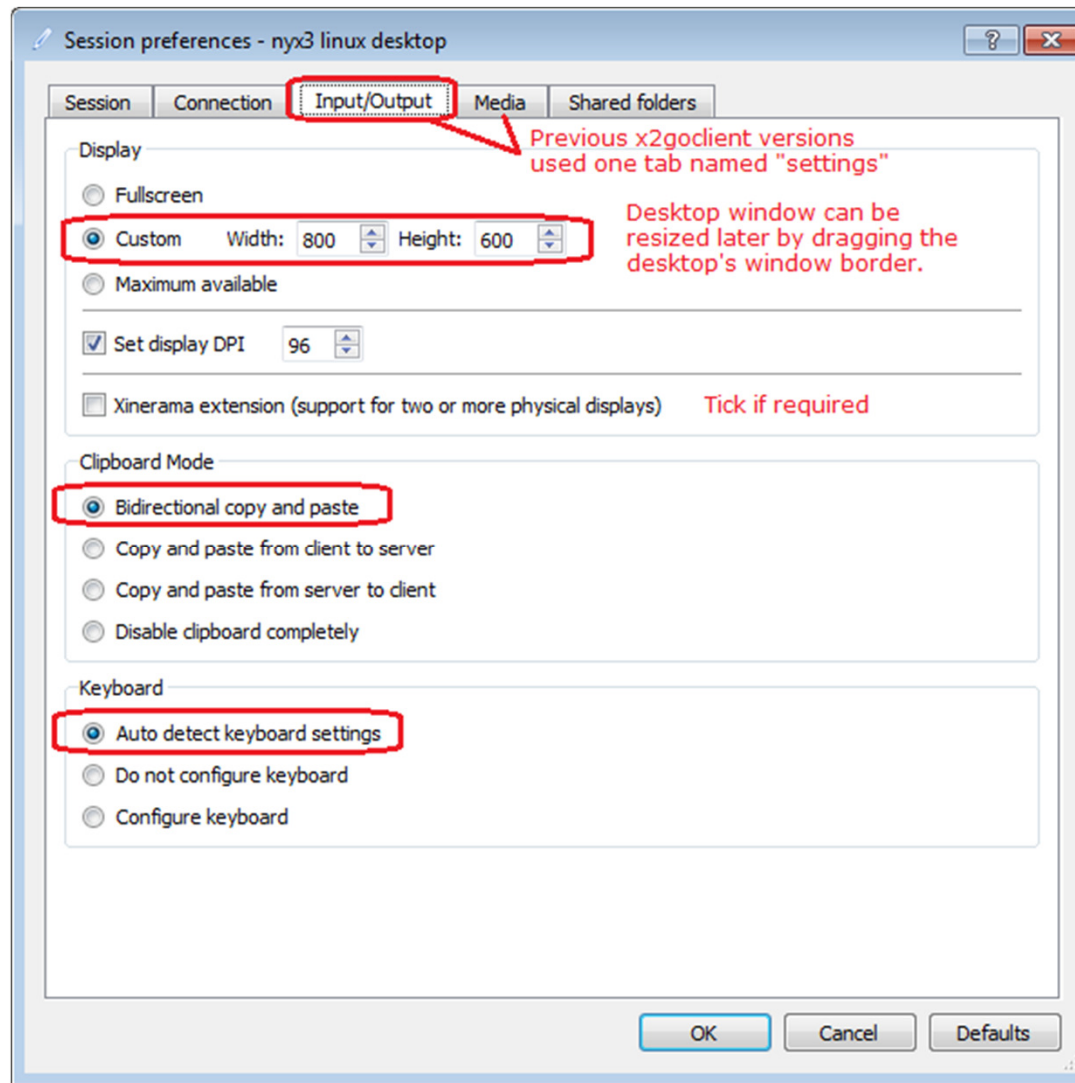
X2GO Setup 1



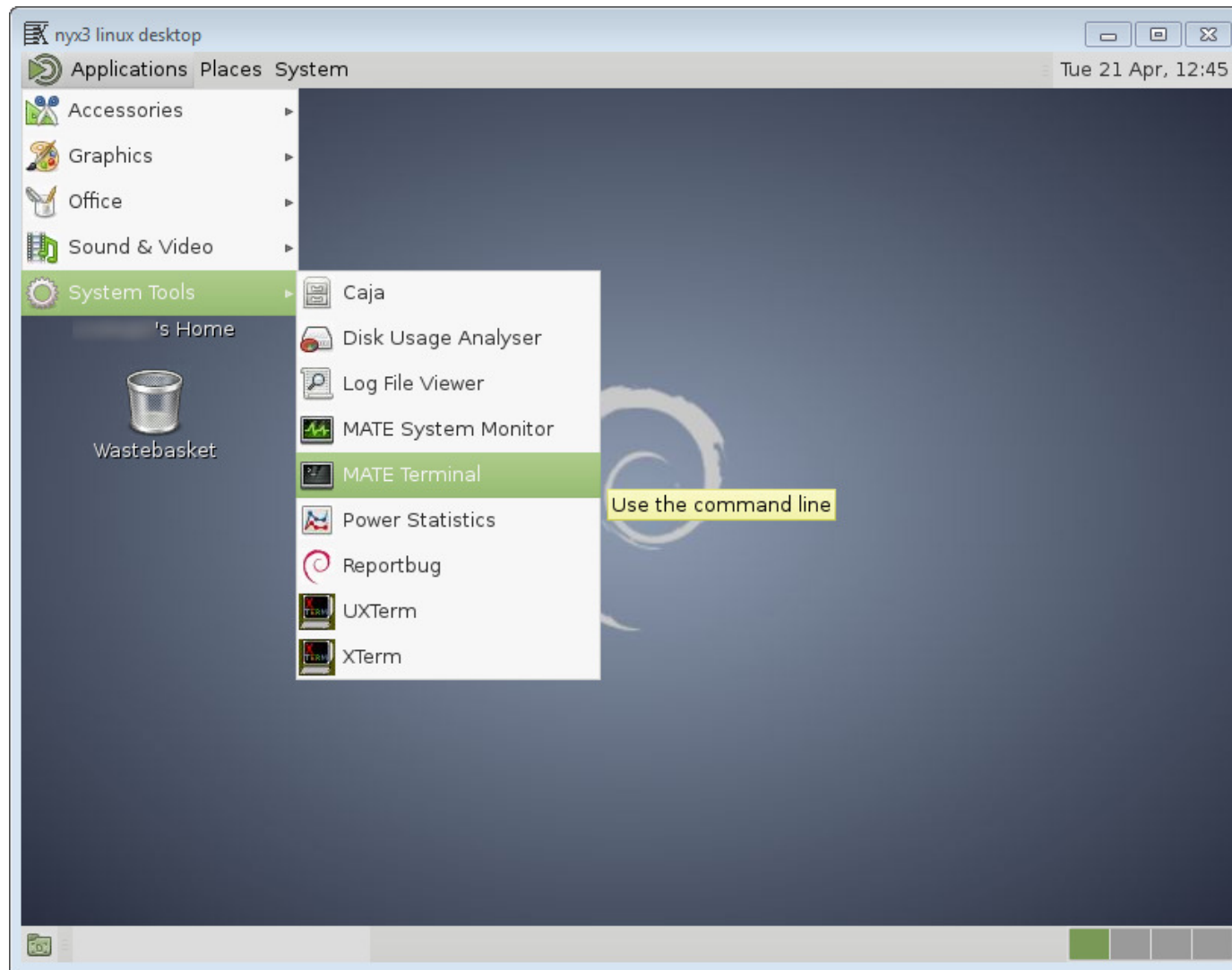
X2GO Setup 2



x2GO Setup 3



X2GO Desktop



X2GO Suspend vs Terminate

The image is a composite of three screenshots illustrating X2GO session management:

- Top Screenshot:** Shows three overlapping desktop windows. The top window is titled "X2GO- -72-1429637882_stDMATE_dp32" and has a yellow box around its title bar. The middle window is titled "nyx3 linux desktop" and has a yellow box around its close button. The bottom window is titled "nyx3 linux desktop" and has a yellow box around its close button. A yellow arrow points from the top window's title bar to the middle window's close button.
- Middle Screenshot:** Shows a desktop environment with a menu open. The menu items are: Preferences, Control Centre, About MATE, Lock Screen, and Log Out. A yellow box highlights the "Log Out" option with the text: "Log out Unknown of this session to log in as a different user".
- Bottom Screenshot:** Shows the X2Go Client window. The window title is "X2Go Client". It has a menu bar with "Session", "Options", and "Help". Below the menu bar are icons for file operations. A white box displays session details:
 - Session ID: -68-1412863962_stDGNOME_dp32
 - Server: nyx3.itservices.manchester.ac.uk
 - Username: [redacted]
 - Display: 68
 - Creation time: [redacted]
 - Status: runningBelow the details box are two buttons: "Suspend" and "Terminate". The "Suspend" button is highlighted with a red box and a red arrow. The "Terminate" button is also highlighted with a red box and a red arrow.

Summary

- iCSF - compute nodes are *shared*
 - Risk from other users' codes
- Drop in connection to iCSF will *kill* apps
 - Risk from network
- Full *home* storage may kill apps
 - Risk from all apps running from your group
- X2GO desktop servers *close* to iCSF
 - Less risk on that local network
 - X2GO desktop keeps running if your connection to desktop suspended or dropped
- Run iCSF code with *checkpointing* (coded by you)
 - Save app state, allows resumption if needed

Need more help with the iCSF?

- Extensive documentation:

<http://ri.itservices.manchester.ac.uk/icsf/>

- X2GO gateway (setup for Win/Mac/Linux)

<http://ri.itservices.manchester.ac.uk/x2go/>

- Contact the Research Infrastructure Team

its-ri-team@manchester.ac.uk