Log into the CLIMB PoreCamp server Instance's Desktop with X2Go

This will allow you to see a windowing environment (like your Desktop) rather than just a terminal! It is a great option if you want to use a GUI application (Graphical User Interface like IGV). It's very cool to see a remote desktop with Firefox and every other GUI application rendered quick and snappy over the Internet!

Here are the steps to get remote X2Go login working... Note that these instructions will only work for this workshops' particular virtual machine. Many VMs will not have the X2Go server installed and therefore you will not be able to connect using the X2Go client. In these cases you will have to look at Step 4 and use SSH. But you should not need to do that for these tutorials.

First determine whether *X2Go Client* is installed on your computer. If it is skip this section. It is not something that is installed by default, so it probably is not there.

There may be a link on your desktop:



Or type 'X2Go' into the start menu search bar



X2Go on Windows (This should already be installed -ONLY do this if you do not have X2Go on your machine)

Installing X2Go client in Windows.

If you need to install X2Go and you have a windows computer, install it from this link (you will need admin rights on your computer). These instructions are specific to people running Windows. If you have a Mac, please scroll down to the section on **Installing X2Go client on MacOSX**. If you have a Linux machine, please scroll down to the section on **Installing X2Go client on Ubuntu**.

The link to install for Windows is here: <u>http://code.x2go.org/releases/binary-win32/x2goclient/releases/</u>

(If you do not have admin rights, alternative instructions can be found here <u>http://wiki.x2go.org/doku.php/doc:installation:x2goclient</u>)

click on the latest link:

4.0.5.1-2016.06.05/ 07-Jun-2016 03:30

Then select the setup program.

x2goclient-4.0.5.1-2016.06.05-setup.exe

05-Jun-2016 05:08 53M

This will download the setup program to your computer. Find the file and click on it: Depending on what browser you are using



In Chrome:

Or FireFox (version number will vary from this screenshot, do not panic :)):

	⊽ C Soogle	☆ 🗈 💽
x2	x2goclient-4.0.1.3+build2-setup(1).exe 23.6 MB — x2go.org — 15:02	d 🖷
<u>te</u> I		
	Show All Downloads	

Internet Explorer (Yet again, the version number will differ, this is no cause for concern :)):

Do you want to run or save x2goclient-4.0.1.3+build2-setup.exe (23.5 MB) from code.x2go.org?	Run	Save 🔻 Cancel 🗙

You will get a screen asking for permission to continue - select 'yes'.

The installer will prompt you to select the language of installation. English might be fine.



The license agreement. Click "I agree".

2gochent 4.0.3.0-2013.01.31		
cense Agreement		
lease review the license terms before installing x2goclient 4.0.5.0-2015.07.3		ð
ress Page Down to see the rest of the agreement.		
GNU GENERAL PUBLIC LICENSE Version 2, June 1991		^
Copyright (C) 1989, 1991 Free Software Foundation, Inc. 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.		
Preamble		
The licenses for most software are designed to take away your		~
f you accept the terms of the agreement, dick I Agree to continue. You must a greement to install x2goclient 4.0.5.0-2015.07.31.	accept t	he
NESSER AV AND A VALUE AND		
T 8	C	ancel

The install location. The default location is acceptable, please just click "Next".

Choose Install Location		12
Choose the folder in which to install $x2godient 4.0.5.0$	-2015.07.31.	9
Setup will install x2godient 4.0.5.0-2015.07.31 in the f folder, click Browse and select another folder. Click Nex	following folder. To install xt to continue.	in a different
Destination Folder		
Destination Folder	Brow	/se
Destination Folder Gt\Program Files (x86)\v2godient Space required: 50.4MB	Brow	/se
Destination Folder Ct\Program Files (x86)\v2godient Space required: 50.4MB Space available: 79.8GB	Brow	/se
Destination Folder C:\Program Files (x86)\x2goclient Space required: 50.4MB Space available: 79.8GB Illsoft Install System v2.46.5-Unicode	Brow	/se

Components. In this step you can choose components to install. Default is OK. Click "Next".

Choose Components Choose which features of x2	godient 4.0.5.0-2015.07.31 you w	vant to install.
Check the components you v install. Click Next to continue	vant to install and uncheck the com	ponents you don't want to
Select the type of install:	Recommended ~	
Or, select the optional components you wish to install:	X2Go Client (required)	Description Position your mouse over a component to see its description.
Space required: 50.4MB	< >	
lullsoft Install System v2.46.5-1	Jnicode	
	c Davida	Naveb

The start menu location. The defaults are acceptable, please just click "Install".

		Laure of the second	
hoose Start Menu Folder			122
Choose a Start Menu folder for the x2goclient 4.0.5.0-2015.07.31 shor	tcuts.)
Select the Start Menu folder in which you would like to create the progra can also enter a name to create a new folder.	am's sho	rtcuts. Y	ou
Accessibility			^
Accessories			
ActiveState Komodo Edit 8			
Administrative Loois			
Adobe LiveCvde ES2			
Artemis			
ASAP Utilities			
ASIO4ALL v2			
Aspera Battle net			~
sort Install System V2.96.5-Unicode			

Start X2Go client in Windows.

Once installed, you should have an **X2go Client** icon on your desktop which you can double click. The icon looks like:



Alternatively, you can look for it in your Start Menu :



When you first run the **X2go Client**, you may get a message about changes to your firewall. These changes are fine.



Windows firewall changes. These changes are not necessary, so please just click "Cancel."

X2Go on Mac OSX

Installing X2Go client on Mac OSX

Prior to the installation of X2Go, you will have to install XQuartz (if you haven't previously)

Download the dmg file at http://xquartz.macosforge.org/landing/



Web site based on a design by Kyle J. McKay for the XQuartz project.

Once it is downloaded, just click on the **XQuartz-2.7.8.dmg** and then open the **XQuartz.pkg**. Follow the standard installation procedures until you reach the following screen :



Once XQuartz is installed, you'll then be able to install X2Go.

Go to <u>http://wiki.x2go.org/doku.php</u> and click on the appropriate MacOS dmg for your computer to download.



The X2Go download page. Please click on the "**OS X 10.6 and higher DMG**" or "**OS X 10.9** and higher DMG" link as appropriate to your machine.

Once downloaded, try to open the **X2GoClient_latest_macosx_10_?.dmg** file. You may get the following warning:



If you see this message, to open the file, please navigate to your Security and Privacy settings. You can do this by going to your System Preferences (under the Apple menu in the upper left of your screen) and then clicking on "**Security and Privacy**."

G	eneral FileVault Fi	rewall Privac	
A login password has	been set for this user	Change Passw	ord
Require passw	ord immediately \$	after sleep or s	creen saver begins
Show a message	ge when the screen is lo	ocked Set Lo	ck Message
☑ Disable autom	atic login		
Allow apps download	ed from:		
O Mac App Store	2		
Mac App Store	e and identified develop	ers	
Anywhere			
"x2goclient" was bloc from an identified de	ked from opening beca veloper.	use it is not	(pen Anyway

OSX's Security and Privacy settings. Please "**Open Anyway**" for the x2goclient.

You can now go back and open the **X2GoClient_latest_macosx.dmg** file. Once open, please move **x2go** into your **Applications** folder.



Starting the X2Go client on Mac OSX

From Applications, open **x2goclient**.

00		😡 Applications	2 ⁷
		\$• = • 2	
FAVORITES Cesky2015 Cesky2015 Dropbox PhD the All My Files All My Files Desktop Docume Downloads Pictures Coogle Ludovic	From 1 MB to 100 MB mection Prom 1 MB to 100 MB mection Stari Stari Skype Stickies Sublime Text 2 System Preferences TextEdit Time Machine Tramsmission Wate the Time Tramsmission Mate the Time Tramsmission Starsmission Mate the Time Transmission Starsmission Mate the Time Transmission Starsmission Mate the Time Transmission		
DEVICES Air Remote x2go ▲ x2go ▲ XQua ▲	 Iocalized Cisco iMovie 9.0.9 Microsoft Office 2011 RealVNC Utilities 	Name x2goclient Kind Application Size 53.3 MB Created Sunday 19 October 2014 1 Modified Sunday 19 October 2014 1 Last opened Sunday 19 October 2014 1 Version	7:25 7:25 7:25

X2Go on Linux

Installing X2Go client on Ubuntu (Linux).

X2Go Client is part of Ubuntu 12.04 & later, as well as Debian Wheezy & Jessie. In Ubuntu, to install it you will probably need admin rights (sudo, root, etc.):

- Open a terminal (Ctrl + Alt + T)
- In the terminal, type "sudo apt-get install x2goclient "

honza@jan-msi:~\$ sudo apt-get install x2goclient

Detailed instructions for other Linux flavours can be found in this link: <u>http://wiki.x2go.org/doku.php/doc:installation:x2goclient</u>

Start X2Go client in Ubuntu (Linux).

In a terminal, type "x2goclient".

honza@jan-msi:~\$ x2goclient

Create a session with X2Go client (all OS).

After launching X2Go in your OS (see above), you should see the main screen. **Note: on some versions of Windows you might get a security message. If so, please select "keep blocking."**

Now you need to tell your computer where to connect to. If this is the first time you've opened X2Go, a new dialog will automatically pop up. If this is not the first time, then you'll need to click on the "New session" icon.



Within the new session dialog box, you'll need to specify:

- A session name. We recommend "My porecamp session".
- A host. This is your instance. Please enter the **Public DNS** of your group server

2

2.5

- A login. This is the username. Please enter "ubuntu".
- The session type. Please select "MATE".

ssion	Connection	Input/Output	Media	Shared folders	
ssion nam	e: New sessio	on			
1	~				
1)				
	2 << 0	change icon			
1					
th: /					
Server					
Host:	147.188.173	.84			
.ogin:	ubuntu				
SSH port:	22				×
Jse RSA/D	SA key for ssh	connection:			
Try aut	to login (via SS	H Agent or defau	lt SSH key)		
Kerber	os 5 (GSSAPI)	authentication			
Delega	tion of GSSAP	I credentials to th	ie server		
Use Pr	oxy server for	SSH connection			
Session typ	pe				
Custom d	esktop	•	Command:	MATE	
Customu			1		

When you click on OK, you should be taken to a new page that looks like the following.



Click anywhere on the white area. This will bring up a new prompt that will allow you to enter a password. Please enter "**porecamp**" as the password.

New session MATE on 147.188.1	73.84	
Login: ubuntu Password:		
Ok	Cancel	

The first time you connect to your instance (or if the public DNS changes) you will see a message that looks something like this (look of this error is dependent on your system, so it does not have to be exactly same as here) :

The server is unknown. D Public key hash: ec2-54-145-219-35.comp 53:e7:90:59:11:c6:46:fd:6	o you trust the ute-1.amazonav b:fb:18:79:40:93	host key? vs.com:22 - 3:31:0c
Yes	No	

Simply click next/yes to continue.

Note : If you are using Mac, you will see two error messages one after the other, just ignore them.

After approximately 30 seconds, you should see the connection open.

Congratulations!

Connection Management

At the end of a working session, first we will need to <u>suspend</u> the connection from X2Go to the Amazon Cloud, then <u>stop</u> the Amazon Cloud instance.

Suspending and reconnecting connection in X2Go

Disconnecting

When you disconnect from X2Go, this will close all your windows and log you off the instance. **The Instance will still be running so make sure you stop in the AWS console – see below.** To disconnect, please go to your X2Go terminal, and click the button on the bottom right.

Session ID:	genomics-50-1452181405_stDMATE_dp24
Server:	ec2-54-161-150-1.compute-1.amazonaws.com
Username:	genomics
Display:	50
Creation time:	čt led 7 16:43:27 2016
Status:	running
Show details	

Reconnecting

In case the VM is stopped and then started, its DNS address may change. If this happens you will need to update it in the X2Go client. To update, please navigate to your session preferences.



An example of navigating to your X2Go session preferences.

Within the session preferences, please go to the Session tab. You can modify the "**host**", which is where you need to specify your new **Public DNS**.

ession	Connection	Input/Output	Media	Shared folders	
ession nam	New sessi	on			
ath: /	2 ~~~	change icon			
Server					
Host:	147.188.173	.84			
Host: Login:	147.188.173 ubuntu	.84			
Host: Login: SSH port:	147.188.173 ubuntu 22	.84			
Host: Login: SSH port: Use RSA/I	147. 188. 173 ubuntu 22 DSA key for ssl	h connection:			
Host: Login: SSH port: Use RSA/I	147. 188. 173 ubuntu 22 DSA key for ssl ito login (via SS	h connection:	t SSH key)		
Host: Login: SSH port: Use RSA/I Try au	147. 188. 173 ubuntu 22 DSA key for ssl ito login (via SS ros 5 (GSSAPI)	h connection:	t SSH key)		
Host: Login: SSH port: Use RSA/I Try au Kerber Delega	147. 188. 173 ubuntu 22 DSA key for ssl ito login (via SS ros 5 (GSSAPI) ation of GSSAP	h connection:	t SSH key) e server		
Host: Login: SSH port: Use RSA/I Try au Kerber Delega Use Pr	147. 188. 173 ubuntu 22 DSA key for ssl to login (via SS ros 5 (GSSAPI) ation of GSSAP roxy server for	584 Agent or defaul authentication I credentials to the SSH connection	t SSH key) e server		

The host field in the Session tab of your Session preferences. The value in this field needs to be the same as your **Public DNS** of your EC2 instance.

<u>Suspending</u>

If you want to close X2Go but leave windows open and running, instead of disconnecting, you can alternatively suspend the session.

Server: Username:	genomics-50-1452181405_ ec2-54-161-150-1.compute genomics	_stDMATE_dp24 e-1.amazonaws.co
Display:	50	
Creation time:	čt led 7 16:43:27 2016	
Status:	running	
Show details		

Within your session details, if you'd like to suspend the session, please click the pause button.

You can now resume your session later on from exactly where you left off.

If your desktop computer crashes or disconnects for any reason - your session should still be running. When you try to log on you will see a this window:

Display	Status	Command	Suspend
68	running	GNOME	Terminate
•		(1)	New

Note that 'Resume' is greyed out...

Click on suspend first and then you can click on resume.