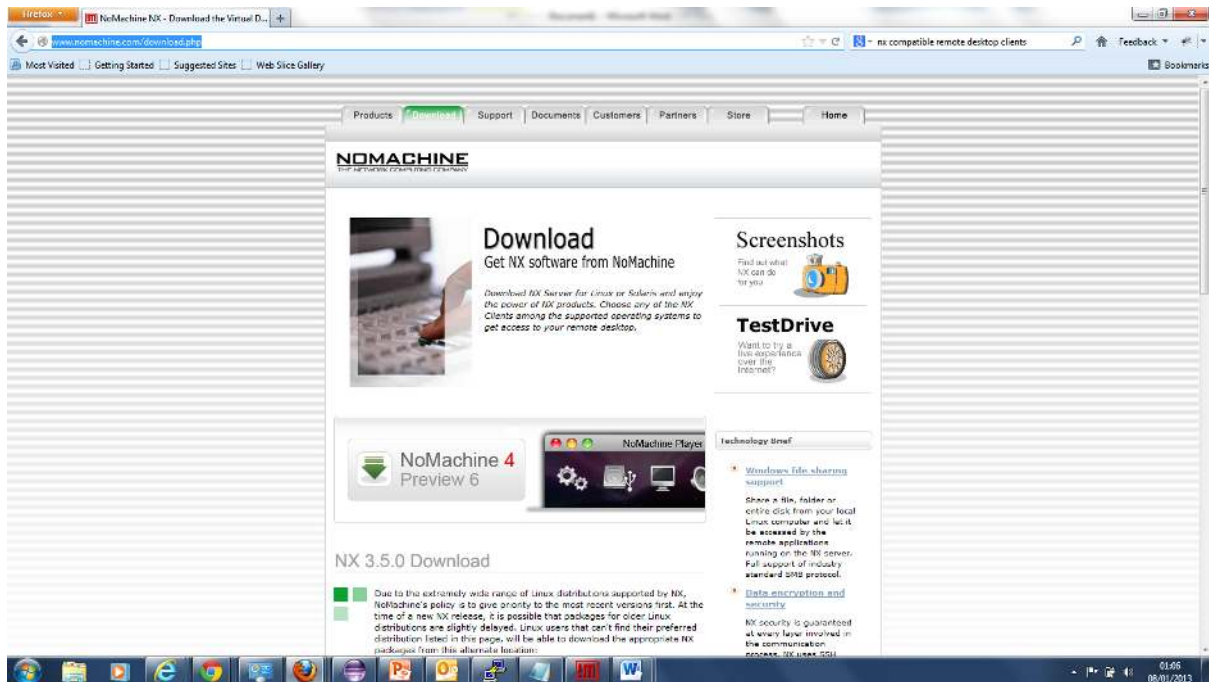


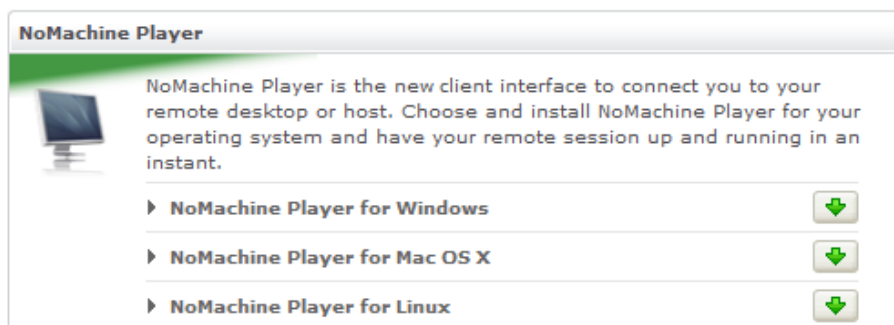
Additional instructions for MacOS NX Player

If you have Mac OSX 10.8 Mountain Lion or higher you may need to install the Mac X11 tools on your machine before trying to connect. You can find these at <http://xquartz.macosforge.org/landing/> Lower version numbers, already have this installed. (Don't ask me why they took it out...).

Version 3.5 of the NX client is incompatible with Mac OSX so we need to use the Preview Player. A link to this can be found at <http://www.nomachine.com/download>

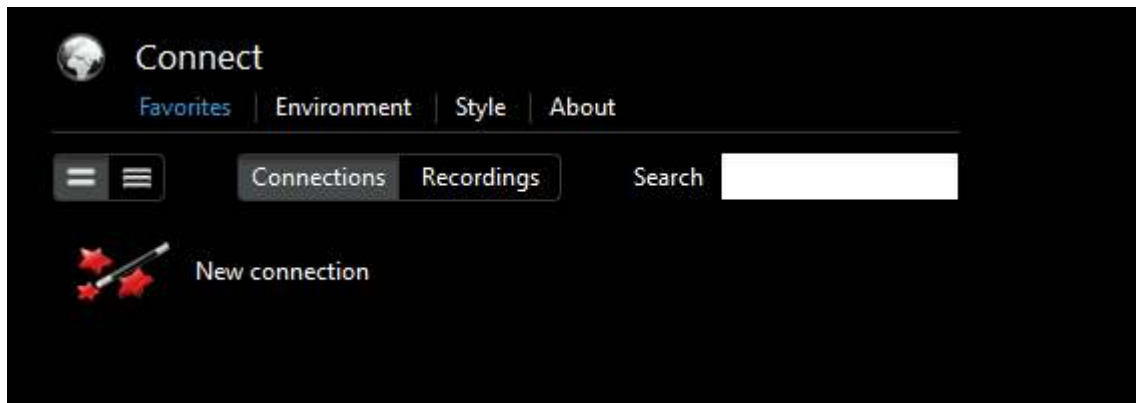


Click on the NoMachine version 4 preview link. This will take you a large selection of downloads. We want the *NX NoMachine Player for MacOSX*. It is about half way down the page.



Click on the NoMachine Player for Mac OS X, download and then run the installation program.

You should then find an icon for NoMachine Player in your Applications. Start the NoMachine Player.

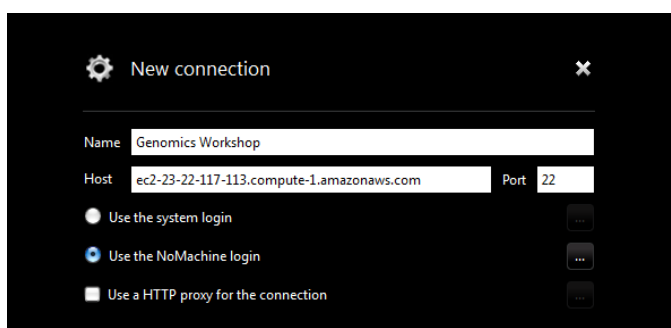


Click on 'New connection' and fill in the details. Remember to use the Public DNS address from **the instance you started**. This can be found on the AWS console if you select your machine as highlighted below. Also make sure that you select the 'Use No Machine login' option.

Launch Instance		Actions											
Viewing: All Instances		All Instance Types		Search									
Name	Instance	AMI ID	Root Device	Type	State	Status Checks	Alarm Status	Monitoring	Security Groups	Key Pair Name	Virtualization		
karin	i-6db5161c	ami-0cfa4465	ebs	m1.xlarge	stopped		none	basic	default	karin_key	paravirtual		
StudentAdam	i-9f3b96ee	ami-5941ce30	ebs	m1.large	stopped		none	basic	default		paravirtual		
kmc	i-1908a568	ami-5941ce30	ebs	m1.large	stopped		none	basic	default		paravirtual		
StudentLuke	i-5bee412a	ami-5941ce30	ebs	m1.large	stopped		none	basic	default		paravirtual		
jcatchen	i-75a11804	ami-0cfa4465	ebs	m1.xlarge	running	2/2 checks passed	none	basic	default	catchen	paravirtual		
empty	i-2bbb035a	ami-5941ce30	ebs	m1.large	terminated		none	basic	default	07231029	paravirtual		
astambuk	i-8bbb03fa	ami-5941ce30	ebs	m1.large	running	2/2 checks passed	none	basic	default	zeki123	paravirtual		
hagman	i-893088f8	ami-5941ce30	ebs	m1.large	terminated		none	basic	default	hagmanamazonkey	paravirtual		
mejia	i-09259d78	ami-5941ce30	ebs	m1.large	terminated		none	basic	default		paravirtual		
shortread test	i-935be0e2	ami-5941ce30	ebs	m1.medium	running	2/2 checks passed	none	basic	default		paravirtual		

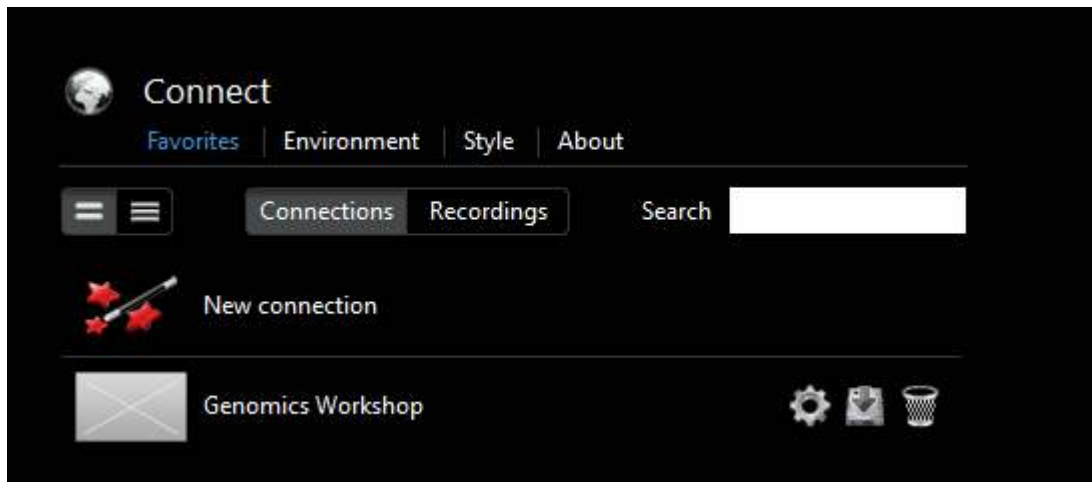
Network Interfaces:			
Public DNS:	ec2-23-22-117-113.compute-1.amazonaws.com		
Private DNS:	ip-10-145-231-106.ec2.internal	Product Codes:	
Private IPs:	10.145.231.106		
Secondary Private IPs:	--		
Launch Time:	2013-01-07 23:15 GMT (1 hour)		
State Transition Reason:			

Once you are done, your screen should look something like this:

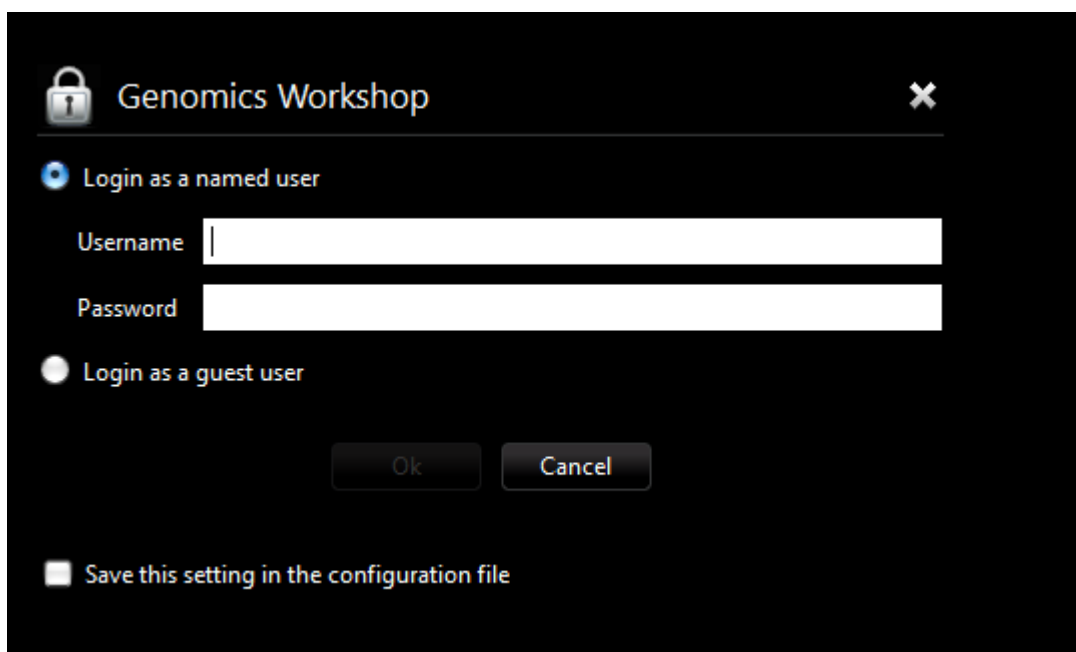


For reasons best known to themselves, the NoMachine people haven't put in the usual save/cancel buttons at the bottom. But if you click on the 'X' at the top right of the window it will save and close the dialogue box. Do this now.

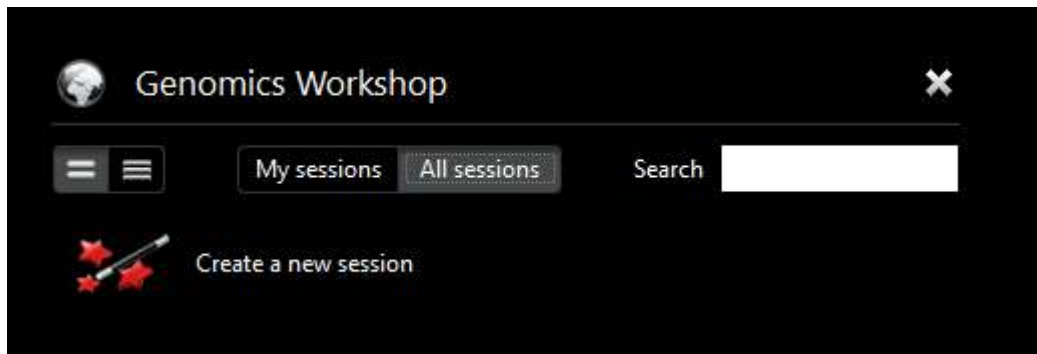
You will then end up with a screen that looks like:



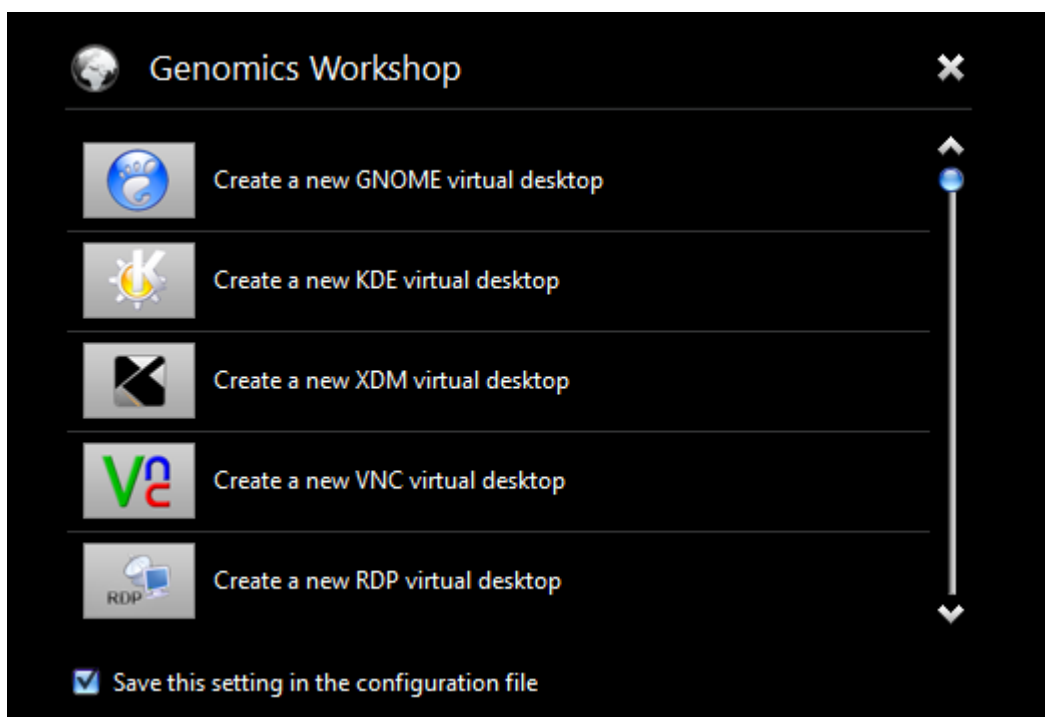
The gear icon on the left hand side represents the settings, so if you ever need to change the settings for your machine (e.g. to update the public DNS address after shutting it down), use this. For now we want to start the NX connection we named 'Genomics Workshop', so click on it. This will take you to the login screen. Enter the username '**ubuntu**' and password '**ubuntu**' (without the quotation marks). Click on OK.



Very confusingly, NX will then ask you whether you want to create a new session. This is because you can have multiple desktop sessions running. Don't confuse this with creating a new connection. A connection is to a physical machine, but a single machine can have multiple sessions running lots of different desktops.



Right now as we've just started this machine, we don't have any other sessions running. Click on 'Create a new session'. We will then get a final screen asking us what type of desktop environment we want. The only one installed on the Amazon machine is GNOME, so select that option and check the 'Save this setting in the configuration file' option at the bottom.

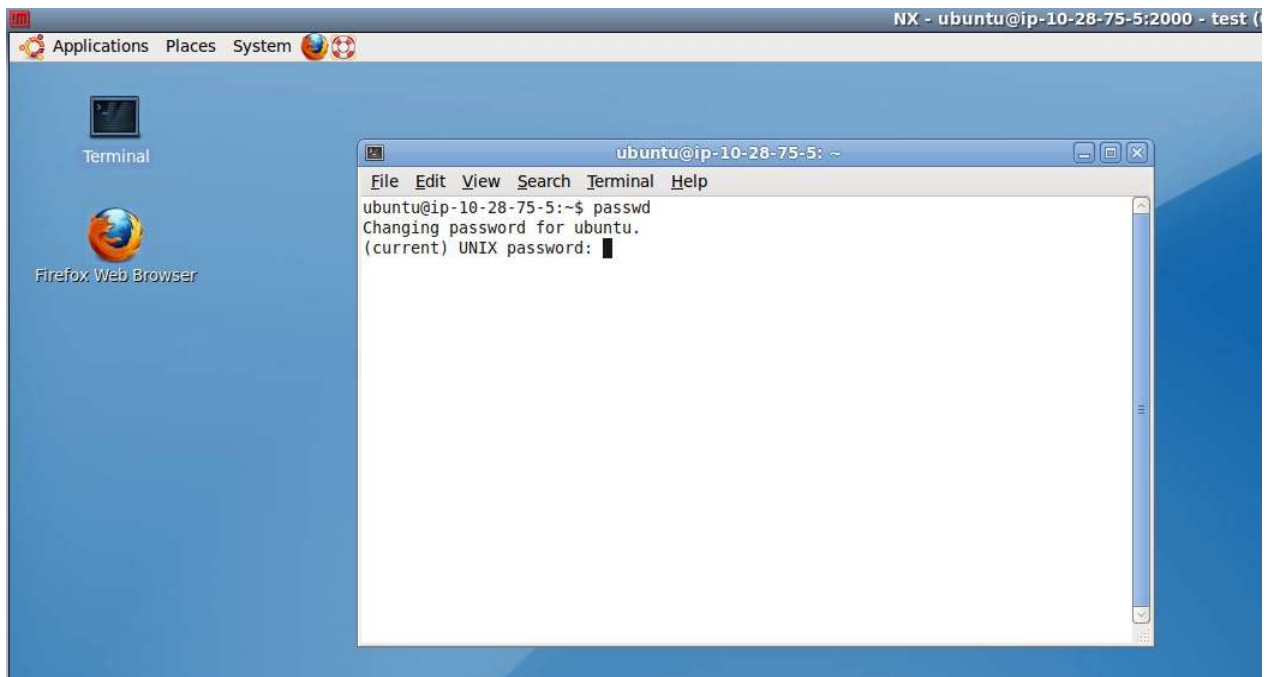


Once connected you should get a nice desktop with links to the Terminal and to the Firefox web-browser. If a window pops up asking if you would like to run any updates, just close it.

One final task is to change your password from ubuntu to something less easy to

guess. Double-click on the 'Terminal' icon and type the command 'passwd' (without the quote marks). Enter 'ubuntu' as the current password (again without the quotes) and then type in a new password of your choice. Note that for security, no characters will appear as you type. Please make it difficult for someone to guess your new password! You will then need to re-enter it to confirm.

Every time you log in via NX after this you will need to enter 'ubuntu' as the username and the password you have just entered.



To close the connection just close the window, you can choose “Disconnect” if you want to log back in later and pick up where you left off. However, if you stop or restart the AMI via the console, any unsaved information will be lost. **If you do stop or restart, remember to check and change the Public DNS address using the AWS console and change the DNS address in NX.**

At this point you've logged into the machine.

Step 4 – Stopping and starting the Instance

When you're done with the workshop it's very important to turn off the VM to avoid unnecessary charges. Just log back into the console, right click the instance and select “Terminate”. It will ask you to confirm. You can then watch the status change from “shutting down” to “terminated”. **Note – this will destroy all work done to date.** If you wish to keep your data, use the 'Stop' option instead. In this state you will not be charged for computing time, but will still be charged for storage.

Very important!

If you stop and then start you instance your Public DNS address may change. If this happens you will need to use the new DNS address with the NX-client or SSH. To do

this, go back to the Connect screen and click on the 'gear' icon to access the settings. Paste in the new Public DNS address into the Host box.

Although much of what we have just done may not make much sense yet, most of you will feel totally comfortable and confident working on an EC2 node running Linux within a few hours. It's really amazing how quickly the fact that this is a remote computer will fade away. It may be hundreds of miles away but it will act just like a local computer, especially if you connect via NX.

Move on to the genomics tutorial!