

# 1 Access eBIC microscopes using NoMachine

## 1.1 FedID

To be set up to attend an eBIC Diamond Light Source (DLS) experimental or training visit you will need to register with DLS systems. If you have already registered, you will know your FedID:

- Ensure you know your FedID and can log in to your Diamond account at: <http://uas.diamond.ac.uk>

If you are visiting DLS for the first time, you will need to register for a FedID. Once all parties on your visit have completed registration, new FedID's and passwords will be sent to you.

- If you do not have a FedID, please follow the procedure here: <https://diamond.ac.uk/dam/jcr:194065c5-fd5a-4fc3-b1eb-6b993776d18e/DLS-user-registration.pdf>

## 1.2 NoMachine

Before you visit eBIC, please check your access to Diamond Light Source systems is not prevented by any local networking or software issues. Please check you can access our virtual machines remotely by completing the following steps.

If you encounter firewall or NAT errors then you will likely need to contact your local network administrator to allow traffic on the port NoMachine is using.

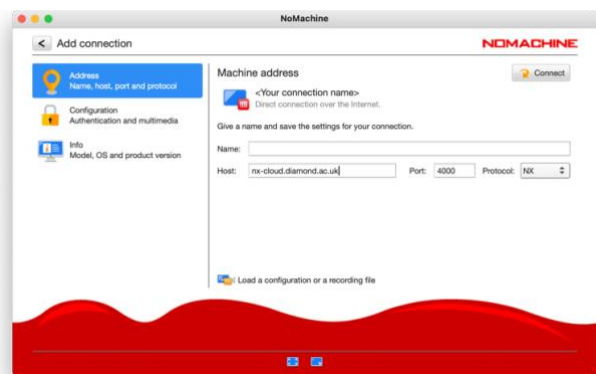
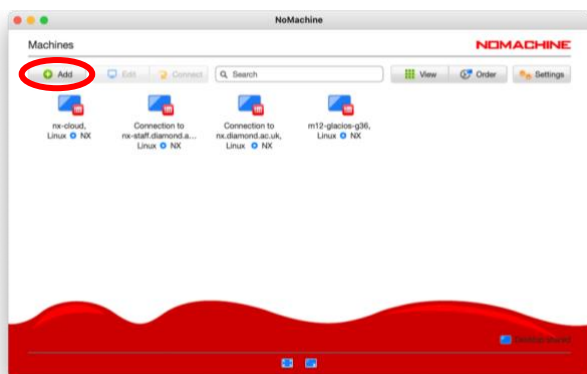
If you encounter authentication errors, please check you can log in to your account at <http://uas.diamond.ac.uk>, and check your credentials again.

If you require further assistance, please reach out to your eBIC Local Contact.

- Ensure you are running the latest version of NoMachine appropriate to your system <https://www.nomachine.com>

## 1.3 New nx-cloud connection

- Open NoMachine
- Click "Add" to create a new connection for using nx-cloud

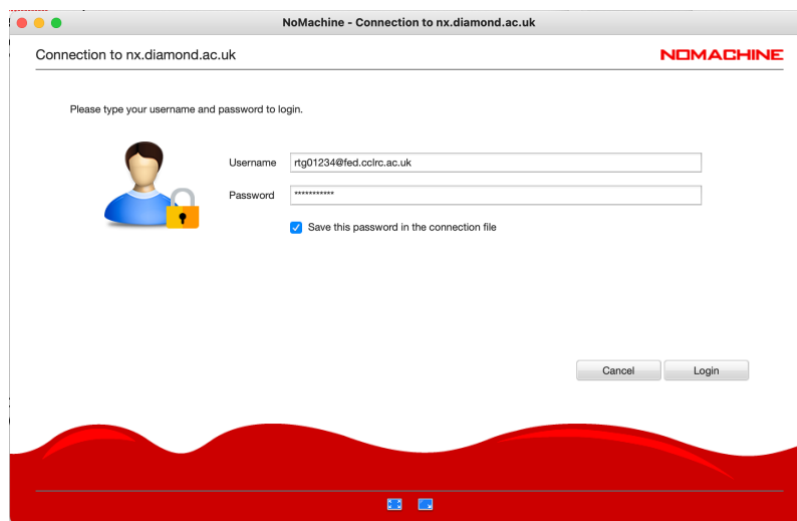


- Enter the host name "nx-cloud.diamond.ac.uk"
- Check the Port and Protocol settings

If NX does not progress to authentication it is likely that your firewall is blocking the port

Click 'Connect'

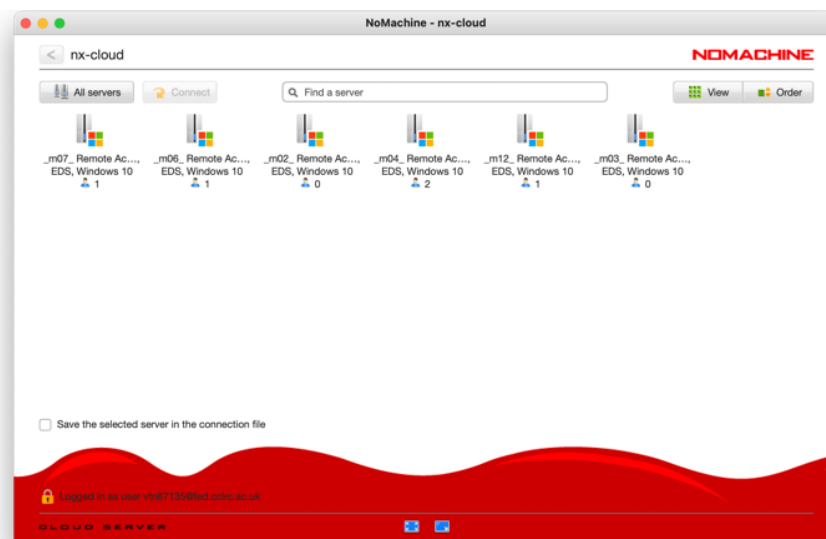
- Enter your FedID and password  
**You must enter the suffix “@fed.cclrc.ac.uk” (i.e. ‘rtg01234@fed.cclrc.ac.uk’)**
- For convenience, we suggest selecting ‘Save this password in the connection file’
- Click ‘Login’



### Troubleshooting authentication errors:

Note that your account will be locked after 5 failed attempts, it will then unlock after 30 minutes. You may manually type your password into the Username field to confirm it is correct, before manually typing into the Password field. This is particularly important for passwords containing special characters and users who have non-UK keyboards.

Please note that, you will not see any instruments if logging in more than 24 hours prior to your microscope session but it is essential to ensure that you can reach this window to avoid delays during your session.



**THIS IS SUFFICIENT FOR CHECKING YOUR CONNECTION  
PRIOR TO YOUR SESSION VISIT**

**The following section will explain how to connect  
to the microscope from NoMachine**

## 1.4 Connect to the remote support PC

Double-click the remote support PC of the microscope you want to connect to



Each remote support PC is associated with a microscope. You will only see the remote support PC of the microscope that is scheduled for your session during your session. The names of the machines are as follows:

Krios I:	m02	Krios III:	m06	Talos:	m04
Krios II:	m03	Krios IV:	m07		

## 1.5 Log in to the remote support PC

After a few seconds you should be able to see a windows login screen.

If you are asked to 'Press Ctrl + Alt + Delete to unlock' then use NX to send this command to the remote machine.

- Press Ctrl + Alt + 0 (win) or Ctrl + Option + 0 (apple) on your keyboard to access NX options
- Alternatively, hover your mouse in the top right corner and click to access the NX options

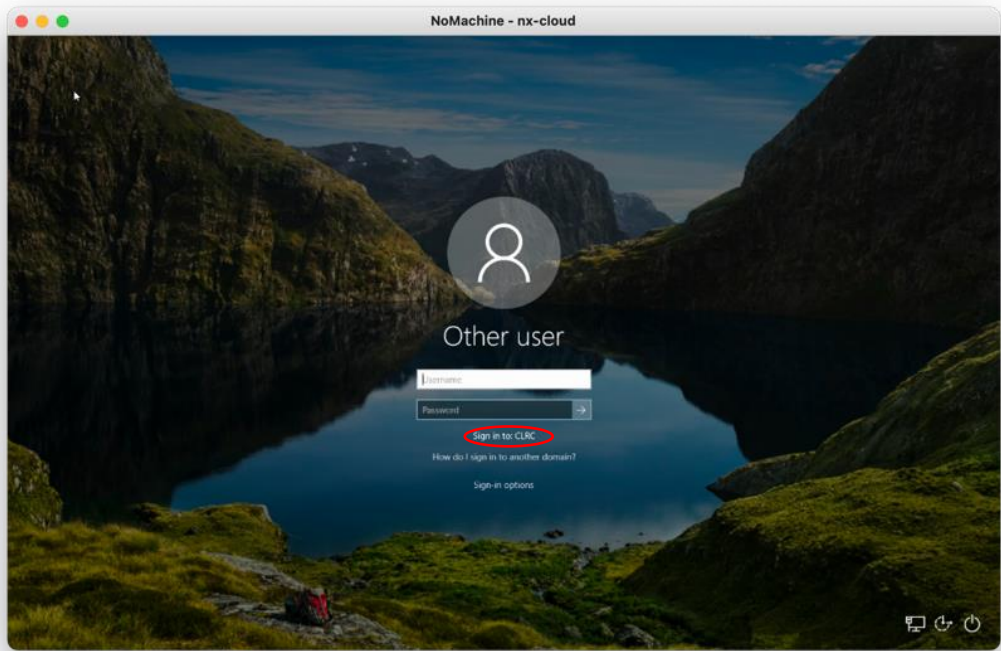


☐ Click on (1) the special sequences button and send (2) the Ctrl + Alt + Del sequence to the remote machine, then (3) to return to the remote machine screen.

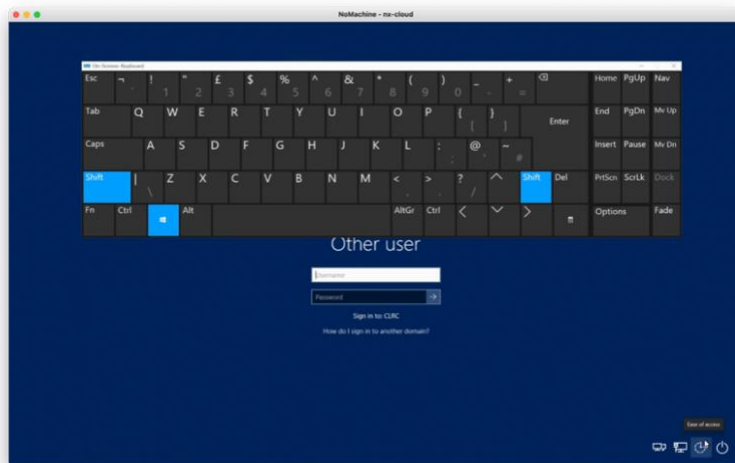


☐ Enter your FedID and FedID password

If 'Sign in to: CLRC' is displayed as highlighted, then enter only your FedID  
If not, then enter the prefix "clrc\", then your FedID (i.e. 'clrc\rtg01234')  
Some users may be required to enter your FedID in its long form (i.e. 'rtg01234@fed.cclrc.ac.uk')



A keyboard can be accessed via the 'Ease of Access' button should you have a different keyboard layout to the remote machine. This can also be accessed once logged in via:  
Start > Settings > Ease of Access > Keyboard

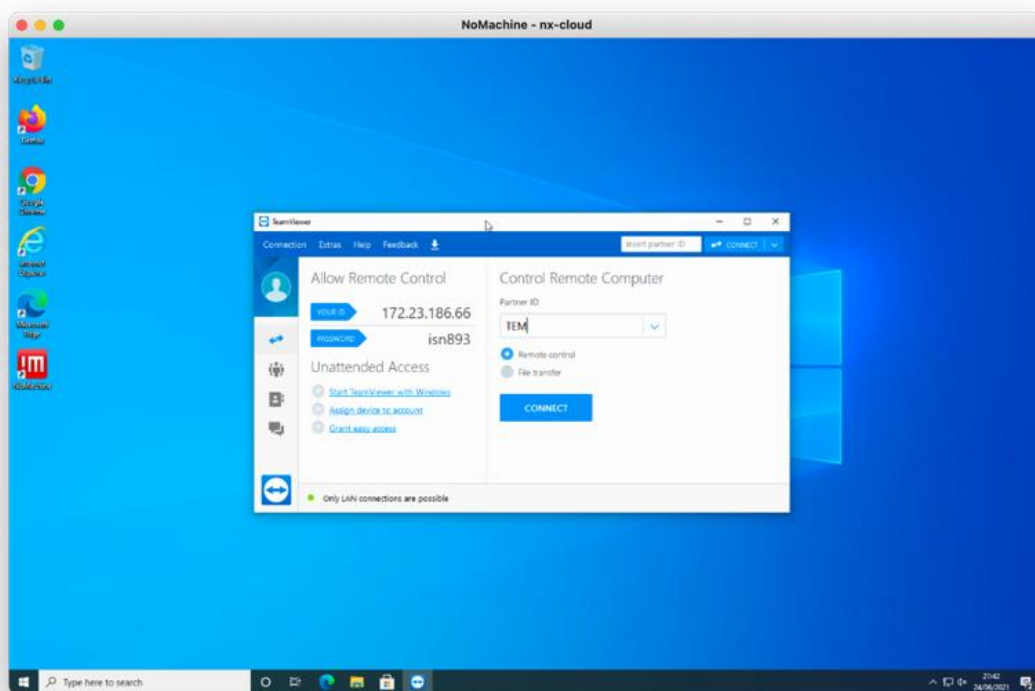


## 1.6 Connect to the microscope using TeamViewer

You are now connected to a windows virtual support PC via NoMachine. This machine has TeamViewer installed.

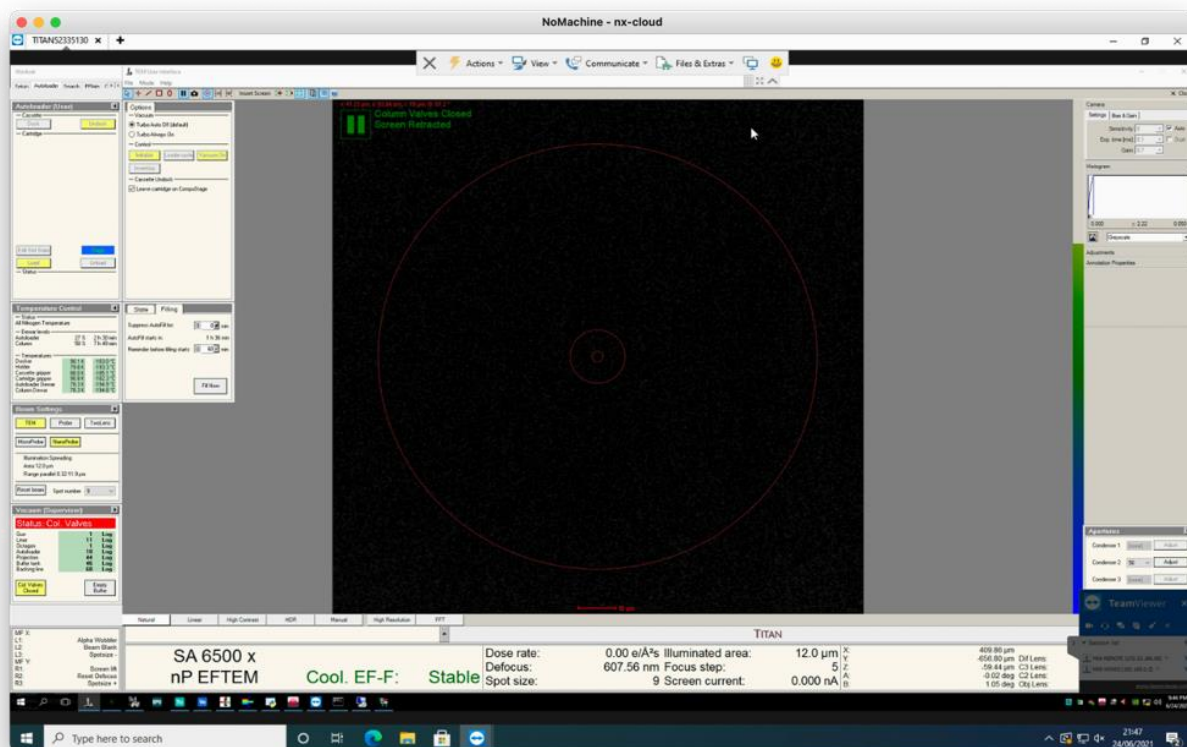
From the windows virtual support PC, you can now connect to your microscope using TeamViewer.

- Start TeamViewer, enter “TEM” as the Partner ID and press Connect
- Enter the TeamViewer password. Check the table below for each instruments password.

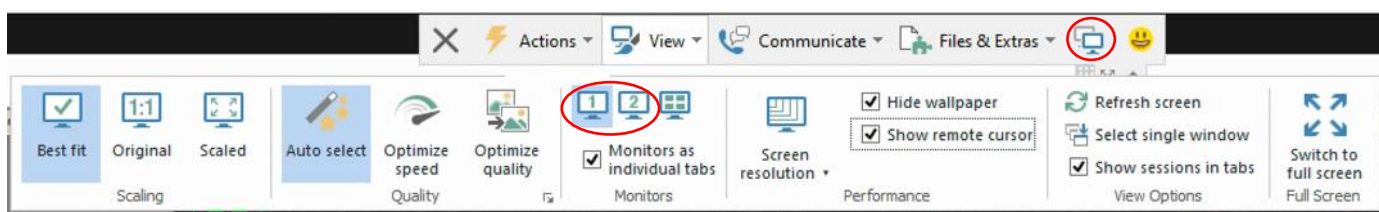


Instrument	TeamViewer user	TeamViewer password
Krios I (m02)	TEM	diamondkrios1
Krios II (m03)	TEM	diamondkrios2
Krios III (m06)	TEM	diamondkrios3
Krios IV (m07)	TEM	diamondkrios4

You will now be connected to the TEM user interface at the microscope on monitor 1. You may use TeamViewer to switch to monitor 2 where EPU or TOMO will be started.

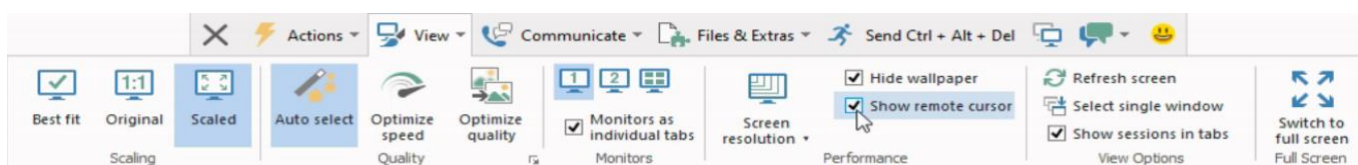


- Set TeamViewer to “Best Fit” under the “View” tab
- Switch between the TEM PC and EPU/TOMO monitors using the “Monitor:1/2” highlighted buttons (🖥️🖥️) under the “View” tab or using the highlighted button (🖥️)



To closely inspect on-screen elements and data you may find “Scaling: Original 1:1” and “Quality: Optimize quality” useful.

- It is not normally necessary to adjust the TeamViewer Screen resolution.**  
Optimal display settings can normally be found using the NoMachine display configuration.
- Please enable ‘Show remote cursor’ so you can see your local contacts mouse pointer.

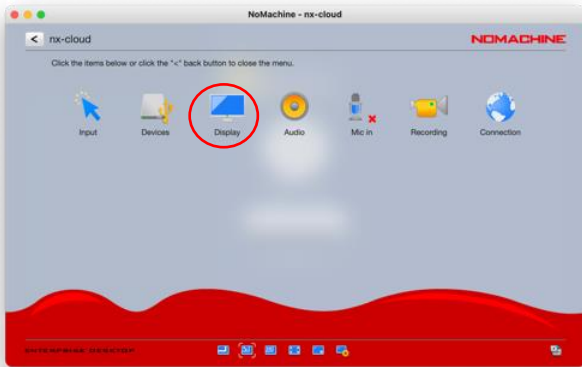


## 1.7 Configure the NoMachine display

- Press Ctrl+Alt+0 (win) or Ctrl+Option+0 (apple) on your keyboard to access NX options
- Alternatively, hover your mouse in the top right corner to access the NX options
- Display > Scale to window

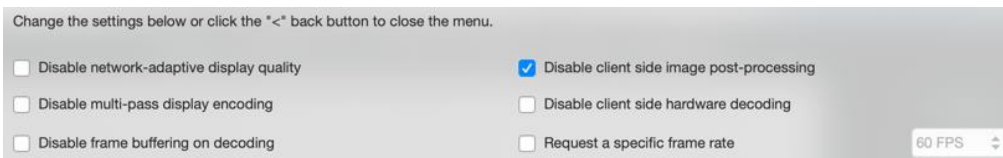
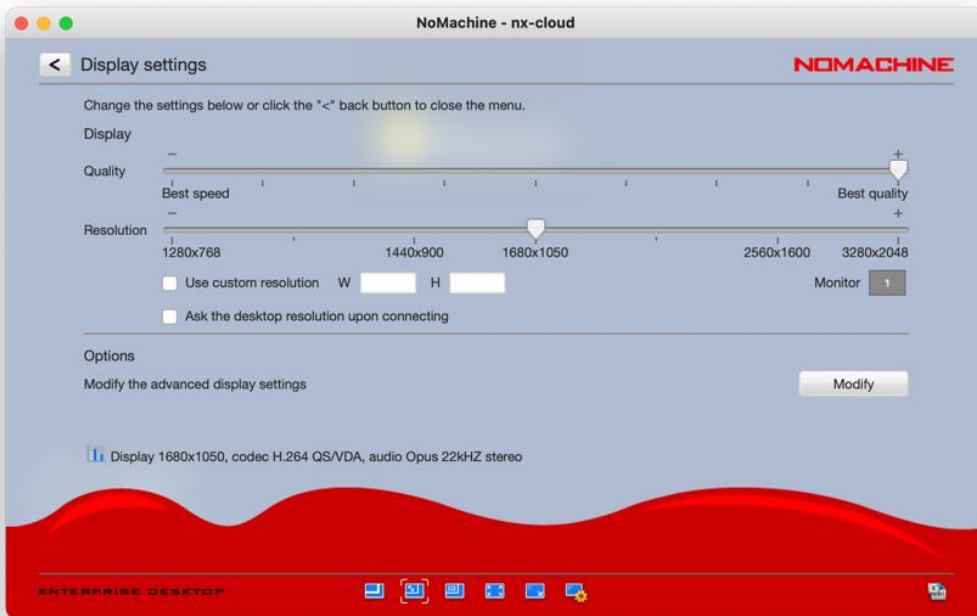
- Display > Change settings > Best Quality
- Display > Change settings > Set resolution appropriate to your system

To closely inspect on-screen elements and data, as well as TeamViewer scaling options, you may find selecting “Enable viewport mode” to view the remote desktop at 1:1 scaling helpful.



Please do not use ‘Resize remote display’.

The following settings work well on a 13-inch screen with a resolution of 2560 x 1600 pixels. Selecting “Disable client side image post-processing” can improve image quality.

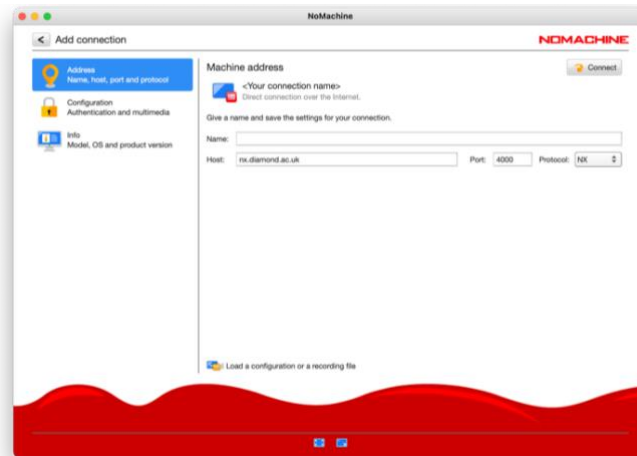




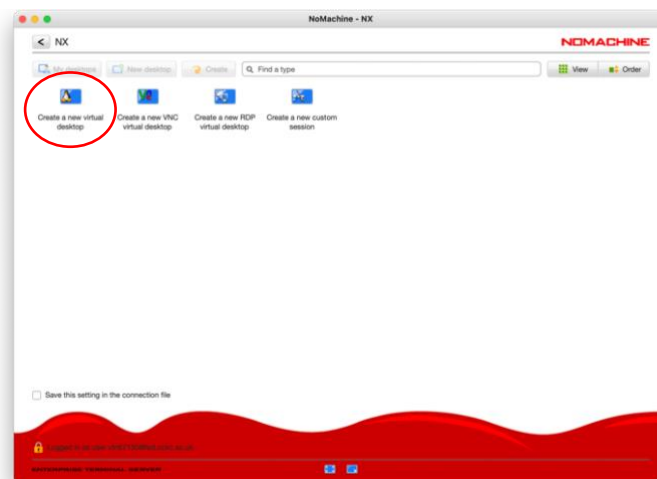
## 2 Access Diamond Light Source Linux using NoMachine

### 2.1 Connect to a Linux machine via NX

- Follow section 1.3 to create a new NX connection but enter the following host name: "nx.diamond.ac.uk"



- Double-click on "Create a new virtual desktop"



- Ensure that you see a Linux environment and can start a terminal

