

Hoffman2 Happy Hour:  
Connecting to the Hoffman2  
Cluster via a remote desktop +  
Q&A

...

Raffaella D'Auria, PhD

## ❏ Connecting via remote desktop

The screenshot shows a desktop environment with a web browser window open to the MATLAB R2020a interface. The browser's address bar shows the URL `https://www.hoffman2.idre.ucla.edu/Using-H2/Computing/Co`. The MATLAB interface is displayed within the browser, featuring a terminal window at the top with the command `module load matlab/9.8` and the MATLAB logo. Below the terminal, the MATLAB interface includes a Command Window, Editor, and a plot of a signal versus time. The plot shows a periodic waveform, likely a sine wave, with the x-axis labeled 'time (in seconds)' and the y-axis labeled 'Signal versus Time'.

# Connecting via a remote desktop

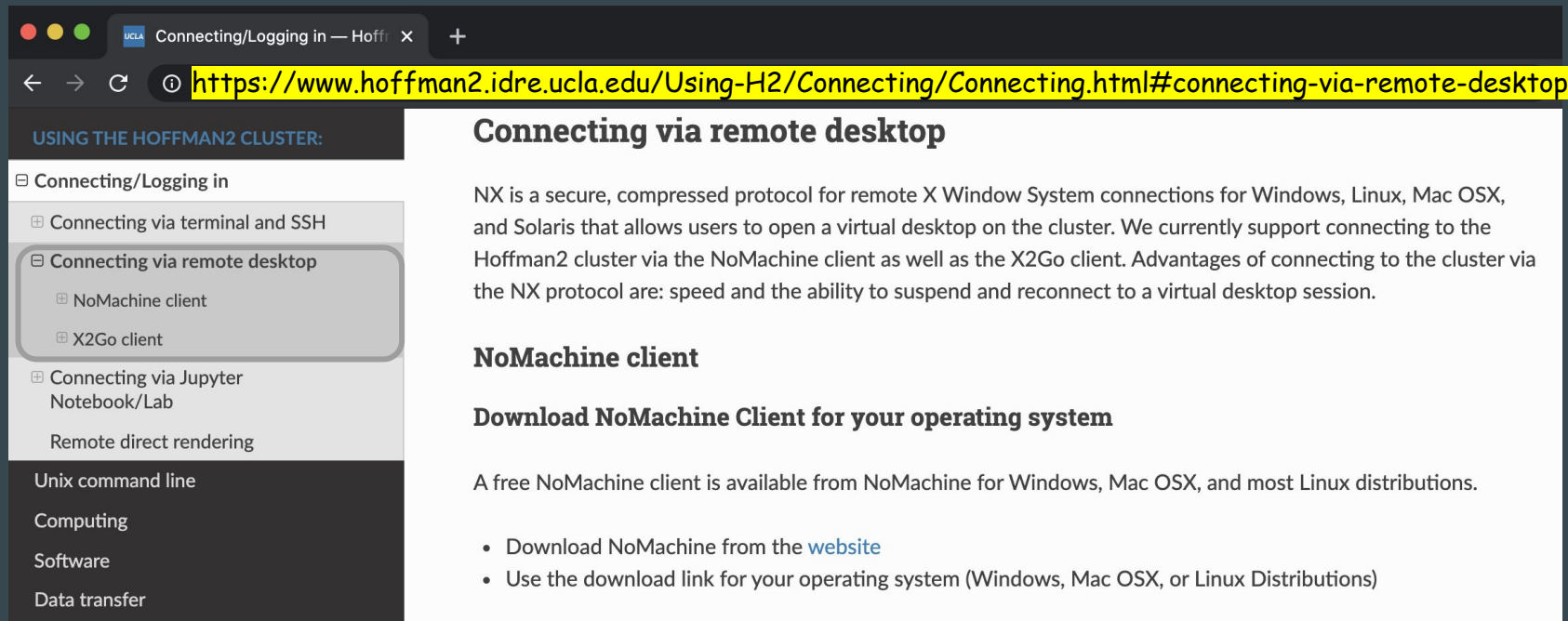
## Advantages

- access a graphical desktop on Hoffman2 over a low bandwidth (or high bandwidth) connection
- responsivity of graphical applications (especially over a slower network or wireless)
- ability to reconnect (most of the times) to a suspended sessions (but you should not depend on it)

## Remote desktop apps supported on Hoffman2

- [NoMachine](#)
- [X2Go](#)

# Opening a remote desktop on Hoffman2



The screenshot shows a web browser window with the URL <https://www.hoffman2.idre.ucla.edu/Using-H2/Connecting/Connecting.html#connecting-via-remote-desktop>. The page title is "Connecting/Logging in — Hoffi". The left sidebar contains a navigation menu with the following items: "Connecting/Logging in", "Connecting via terminal and SSH", "Connecting via remote desktop" (highlighted), "Connecting via Jupyter Notebook/Lab", "Remote direct rendering", "Unix command line", "Computing", "Software", and "Data transfer". The main content area is titled "Connecting via remote desktop" and contains the following text: "NX is a secure, compressed protocol for remote X Window System connections for Windows, Linux, Mac OSX, and Solaris that allows users to open a virtual desktop on the cluster. We currently support connecting to the Hoffman2 cluster via the NoMachine client as well as the X2Go client. Advantages of connecting to the cluster via the NX protocol are: speed and the ability to suspend and reconnect to a virtual desktop session." Below this text is a section titled "NoMachine client" with the subheading "Download NoMachine Client for your operating system". The text states: "A free NoMachine client is available from NoMachine for Windows, Mac OSX, and most Linux distributions." and lists two bullet points: "Download NoMachine from the [website](#)" and "Use the download link for your operating system (Windows, Mac OSX, or Linux Distributions)".

Connecting/Logging in — Hoffi x

← → ↻ ⓘ <https://www.hoffman2.idre.ucla.edu/Using-H2/Connecting/Connecting.html#connecting-via-remote-desktop>

USING THE HOFFMAN2 CLUSTER:

- Connecting/Logging in
  - Connecting via terminal and SSH
  - Connecting via remote desktop**
    - NoMachine client
    - X2Go client
  - Connecting via Jupyter Notebook/Lab
    - Remote direct rendering
- Unix command line
- Computing
- Software
- Data transfer

## Connecting via remote desktop

NX is a secure, compressed protocol for remote X Window System connections for Windows, Linux, Mac OSX, and Solaris that allows users to open a virtual desktop on the cluster. We currently support connecting to the Hoffman2 cluster via the NoMachine client as well as the X2Go client. Advantages of connecting to the cluster via the NX protocol are: speed and the ability to suspend and reconnect to a virtual desktop session.

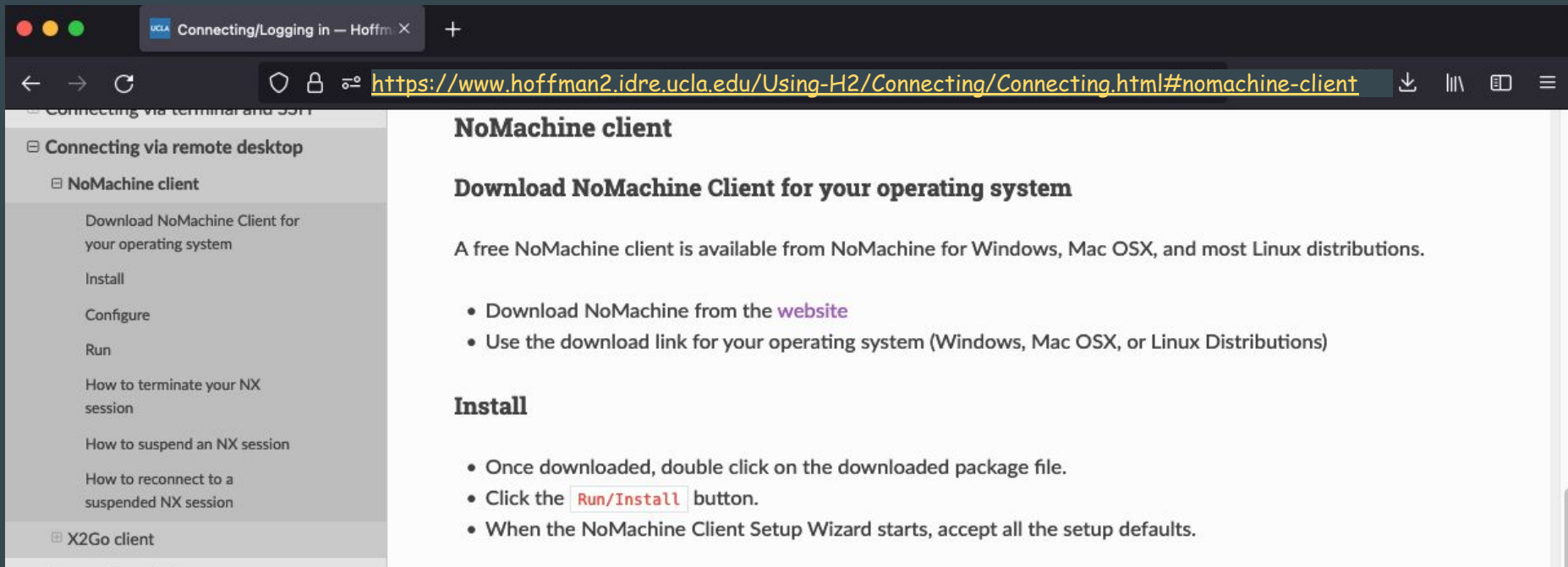
### NoMachine client

#### Download NoMachine Client for your operating system

A free NoMachine client is available from NoMachine for Windows, Mac OSX, and most Linux distributions.

- Download NoMachine from the [website](#)
- Use the download link for your operating system (Windows, Mac OSX, or Linux Distributions)

# NoMachine (NX) client (Linux, MacOS, Windows)



The screenshot shows a web browser window with the address bar displaying the URL: <https://www.hoffman2.idre.ucla.edu/Using-H2/Connecting/Connecting.html#nomachine-client>. The page content is as follows:

## NoMachine client

### Download NoMachine Client for your operating system

A free NoMachine client is available from NoMachine for Windows, Mac OSX, and most Linux distributions.

- Download NoMachine from the [website](#)
- Use the download link for your operating system (Windows, Mac OSX, or Linux Distributions)

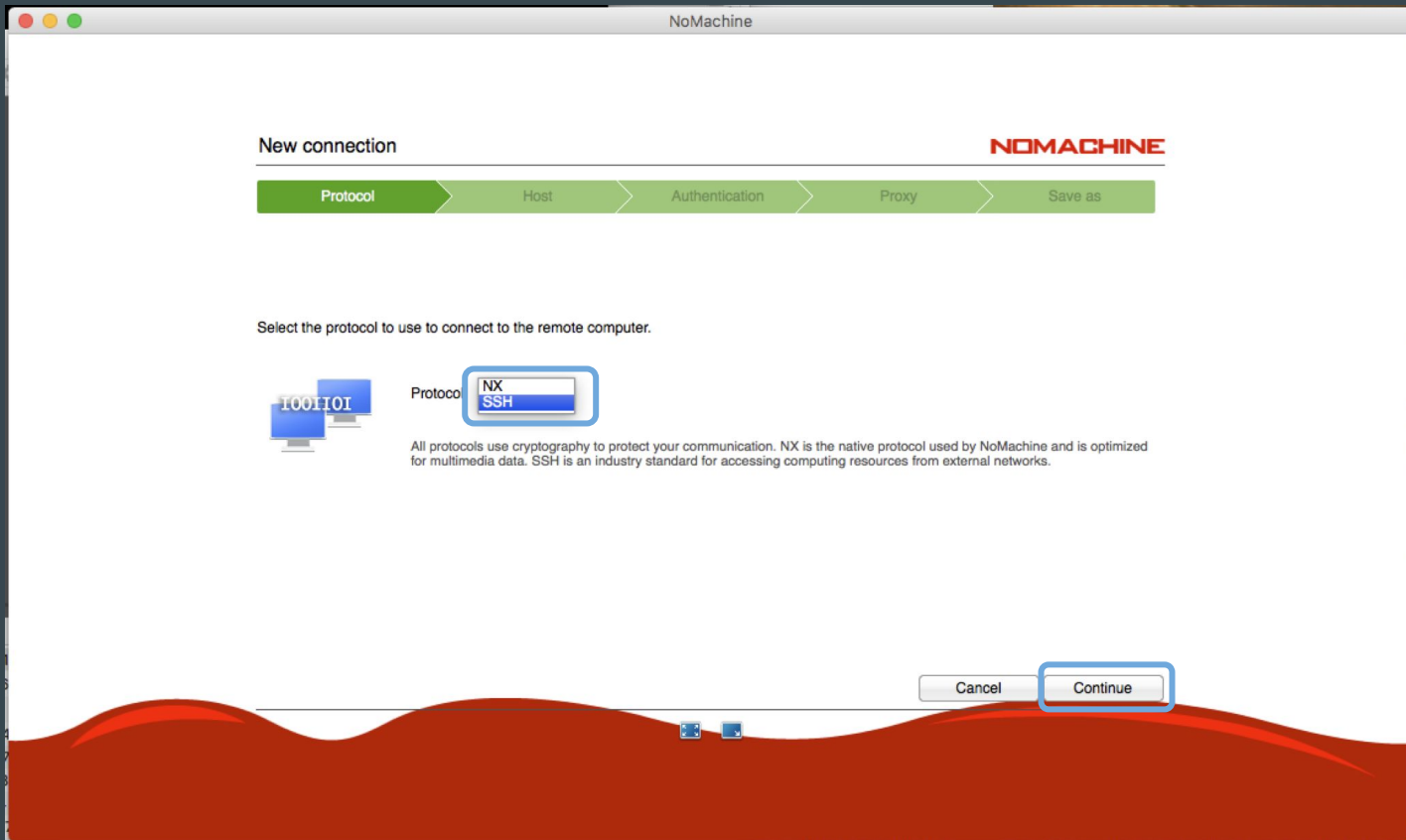
### Install

- Once downloaded, double click on the downloaded package file.
- Click the **Run/Install** button.
- When the NoMachine Client Setup Wizard starts, accept all the setup defaults.

The left sidebar of the browser shows a navigation menu with the following items:

- Connecting via terminal and SSH
- Connecting via remote desktop
  - NoMachine client
    - Download NoMachine Client for your operating system
    - Install
    - Configure
    - Run
    - How to terminate your NX session
    - How to suspend an NX session
    - How to reconnect to a suspended NX session
  - X2Go client

# Opening a remote desktop on Hoffman2: nomachine




# Opening a remote desktop on Hoffman2: nomachine

NoMachine

New connection **NOMACHINE**

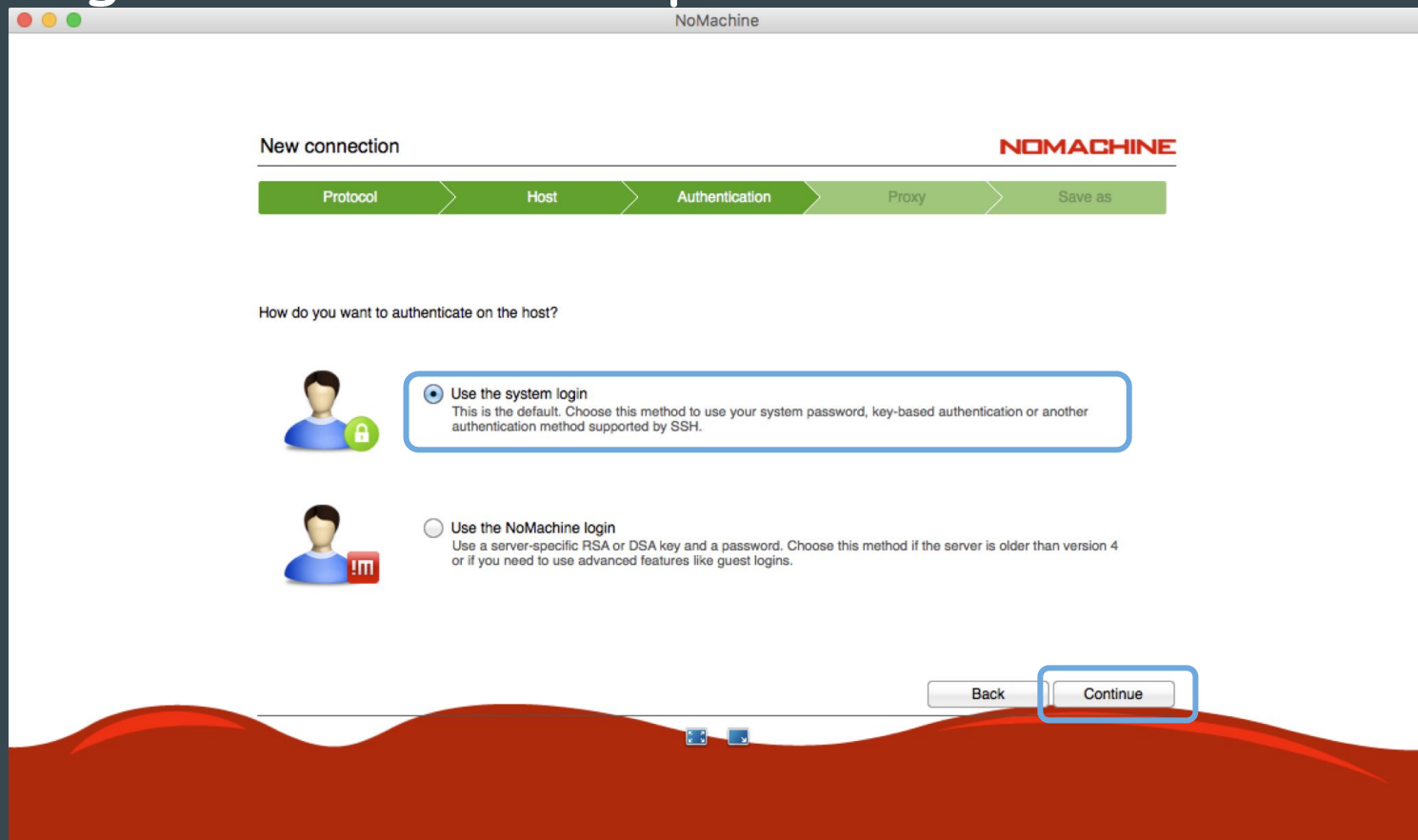
Protocol > Host > Authentication > Proxy > Save as

Insert the hostname or IP and port where you want to connect.

 Host  Port

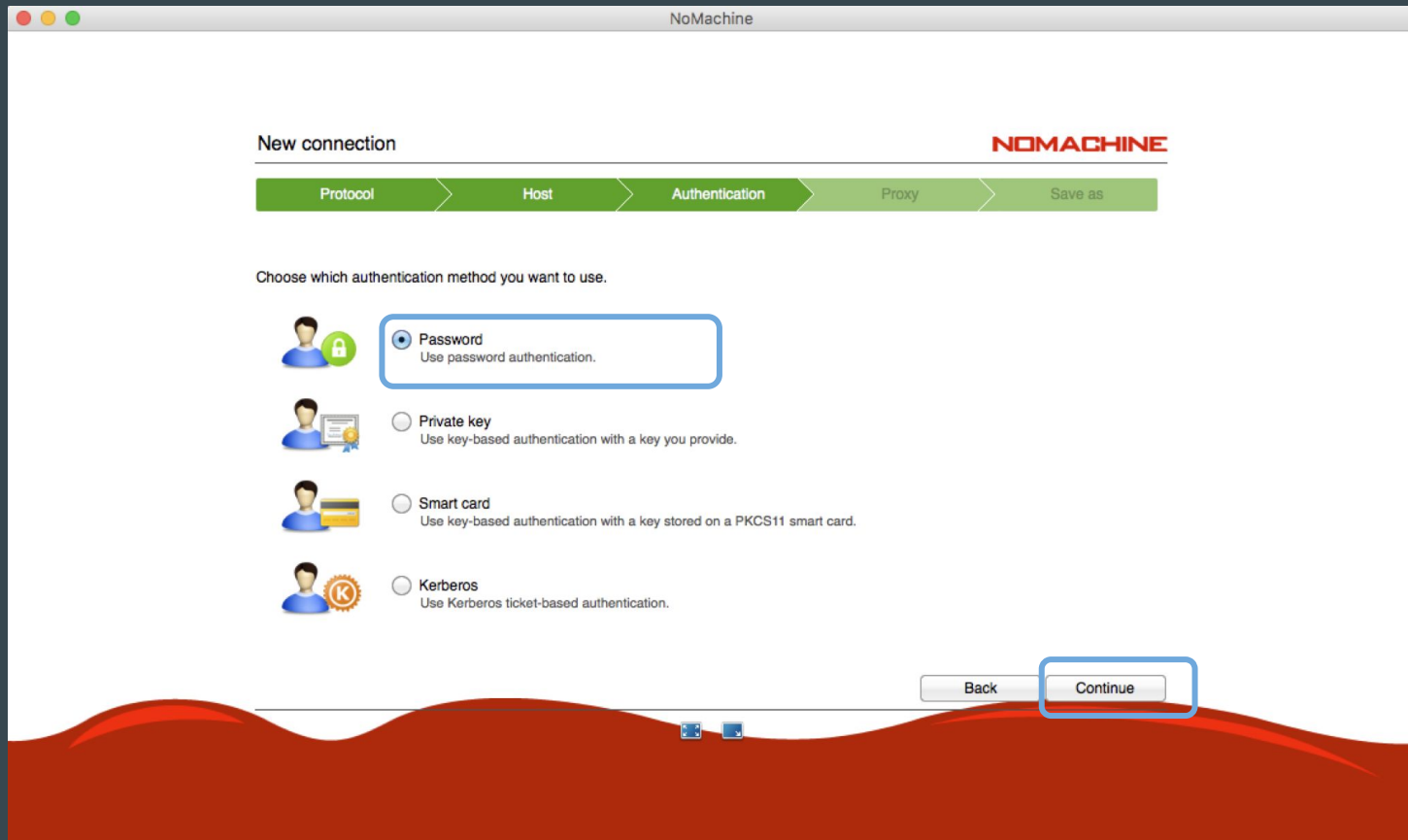
The port was chosen automatically based on the default for the protocol. If the remote computer was configured to listen on a different port, please insert it above.

# Opening a remote desktop on Hoffman2: nomachine

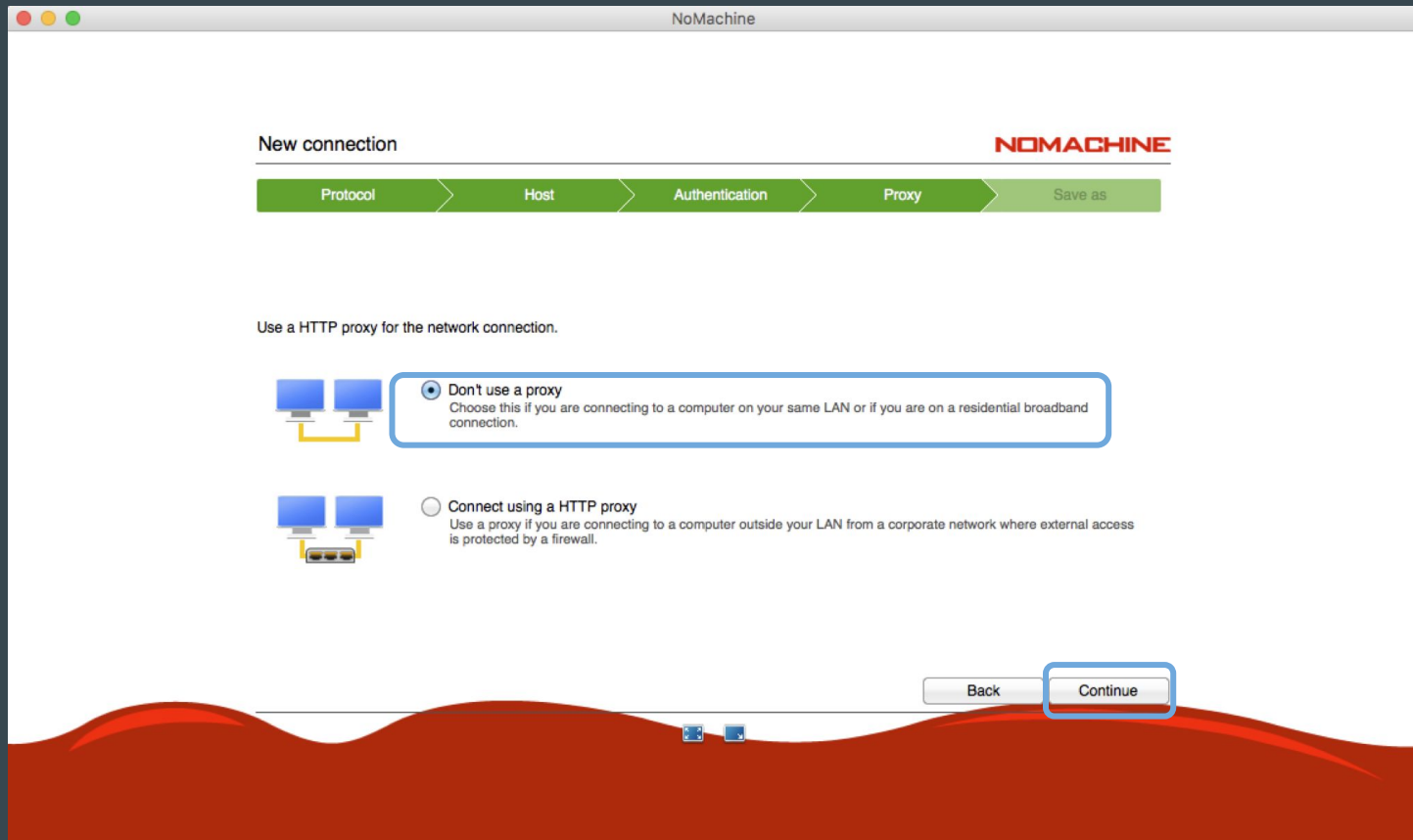




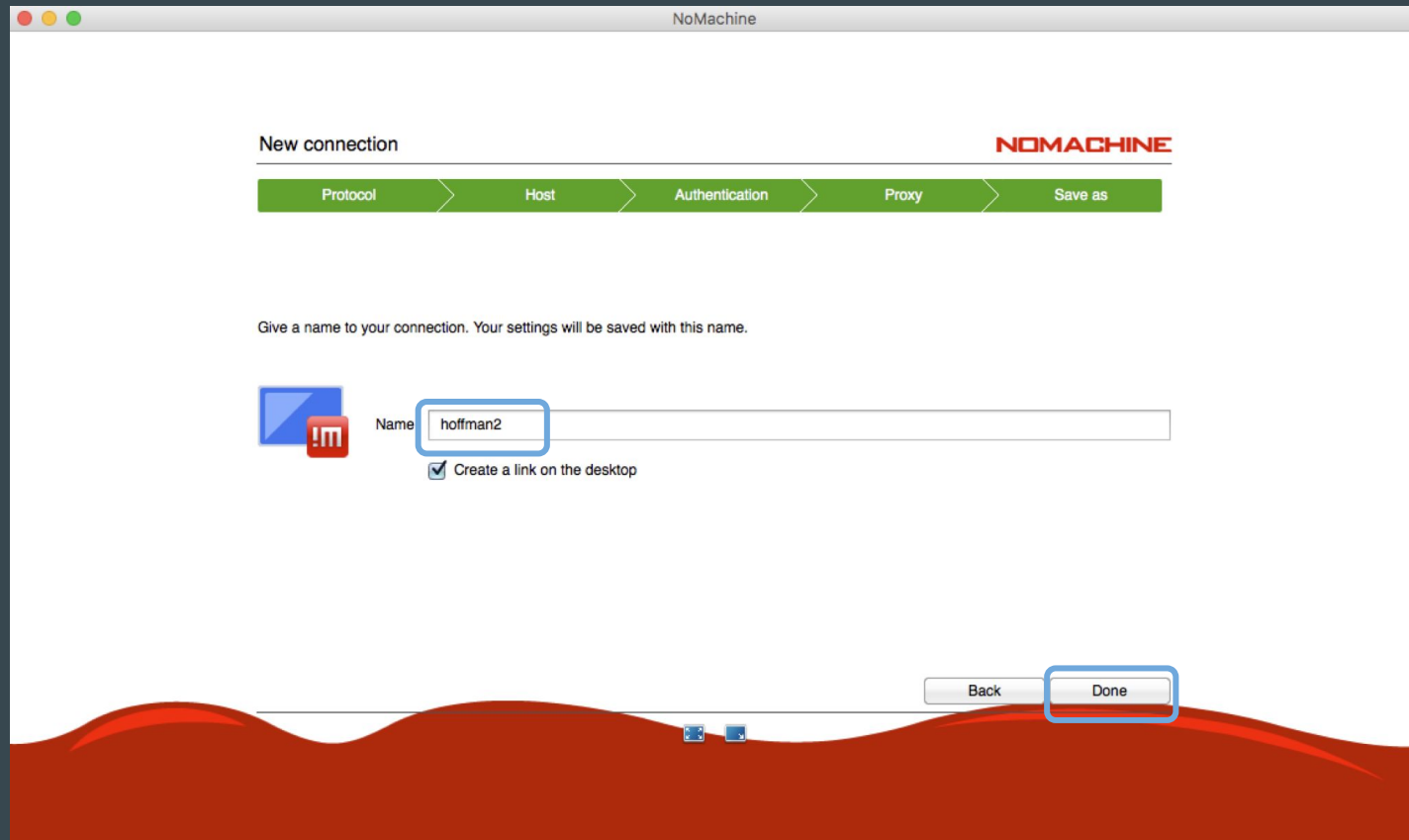
# Opening a remote desktop on Hoffman2: nomachine



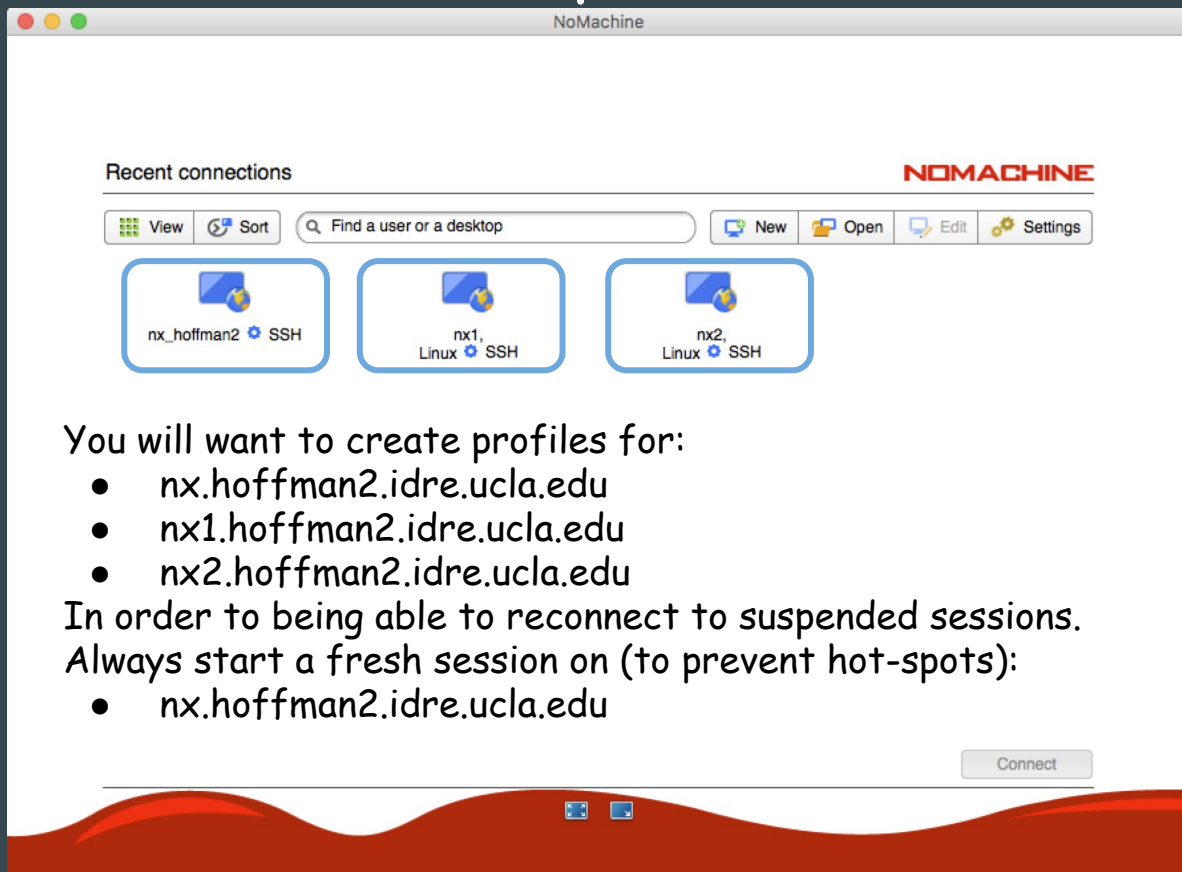
# Opening a remote desktop on Hoffman2: nomachine



# Opening a remote desktop on Hoffman2: nomachine



# Opening a remote desktop on Hoffman2: nomachine



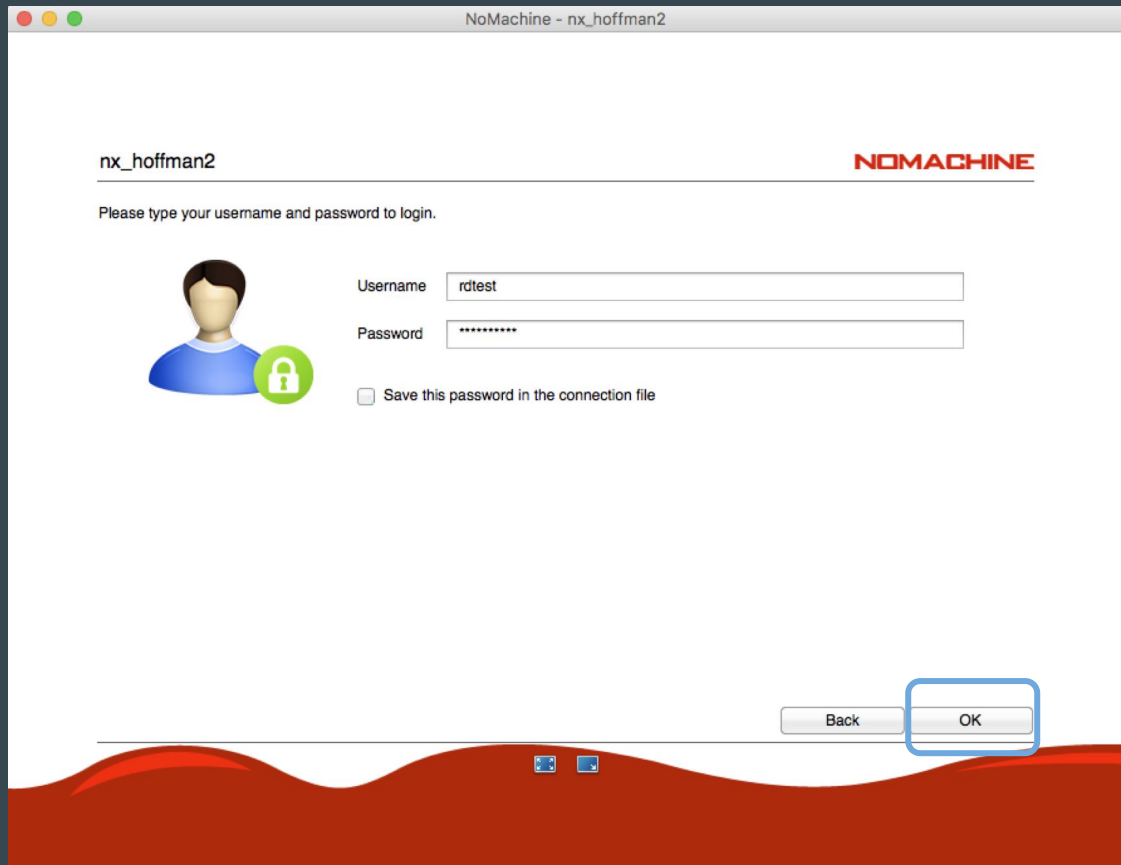
You will want to create profiles for:

- nx.hoffman2.idre.ucla.edu
- nx1.hoffman2.idre.ucla.edu
- nx2.hoffman2.idre.ucla.edu

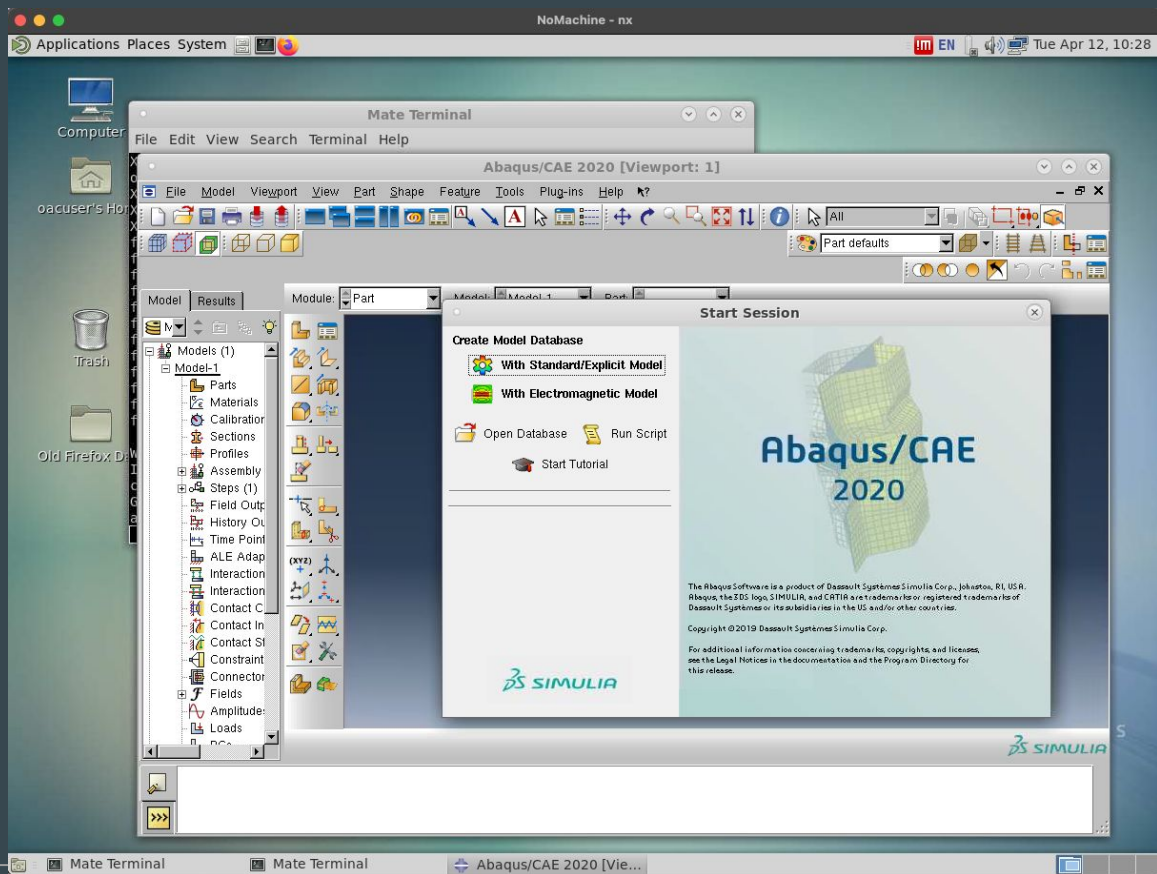
In order to being able to reconnect to suspended sessions.  
Always start a fresh session on (to prevent hot-spots):

- nx.hoffman2.idre.ucla.edu

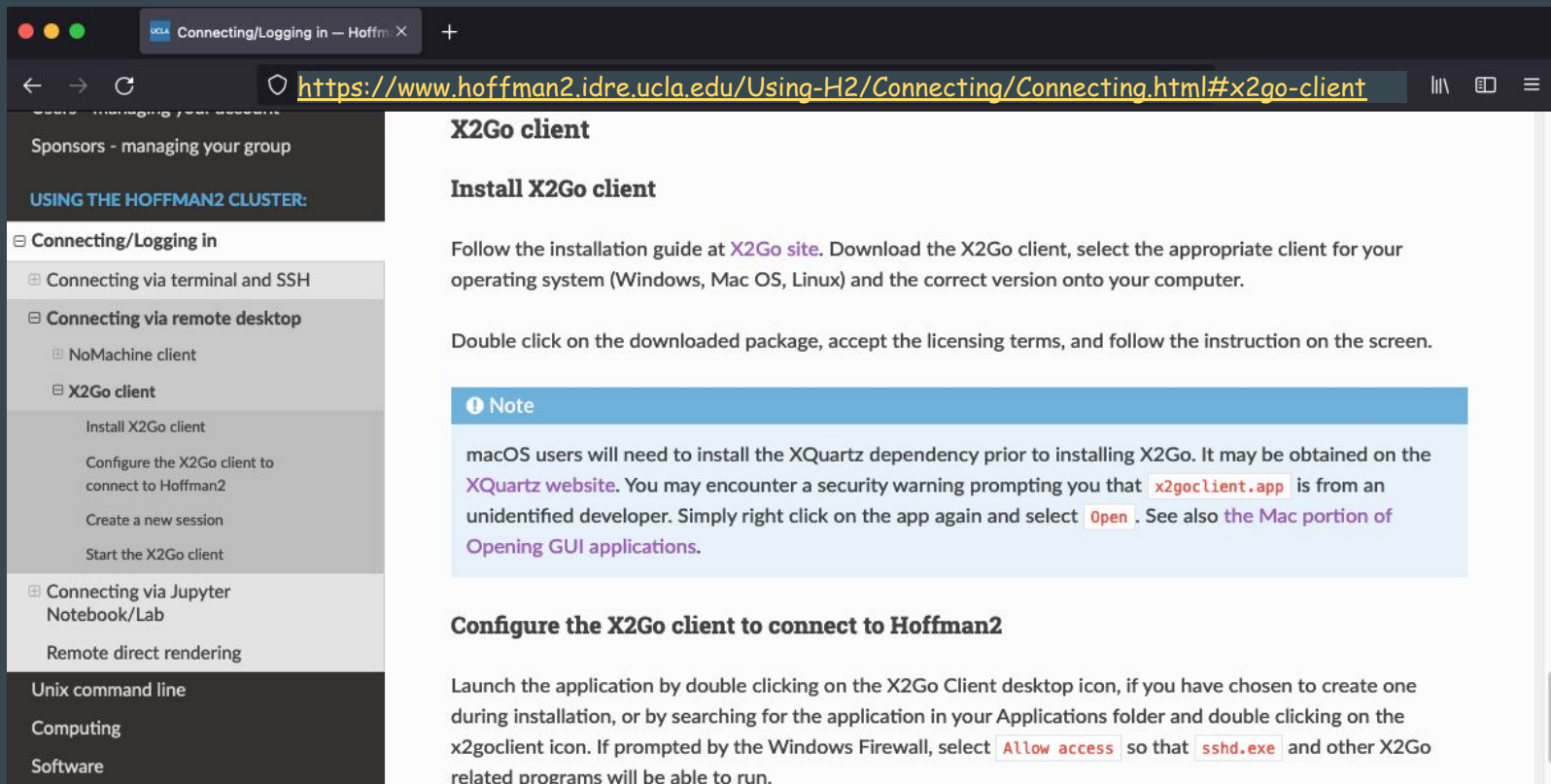
# Opening a remote desktop on Hoffman2: nomachine



# Opening a remote desktop on Hoffman2: nomachine



# X2go client (Linux, MacOS, Windows)



The screenshot shows a web browser window with the URL <https://www.hoffman2.idre.ucla.edu/Using-H2/Connecting/Connecting.html#x2go-client>. The page is titled "X2Go client" and "Install X2Go client". It provides instructions for installing the X2Go client on Windows, Mac OS, and Linux. A note mentions that macOS users need to install the XQuartz dependency. The page also includes a section for configuring the X2Go client to connect to Hoffman2.

**X2Go client**

**Install X2Go client**

Follow the installation guide at [X2Go site](#). Download the X2Go client, select the appropriate client for your operating system (Windows, Mac OS, Linux) and the correct version onto your computer.

Double click on the downloaded package, accept the licensing terms, and follow the instruction on the screen.

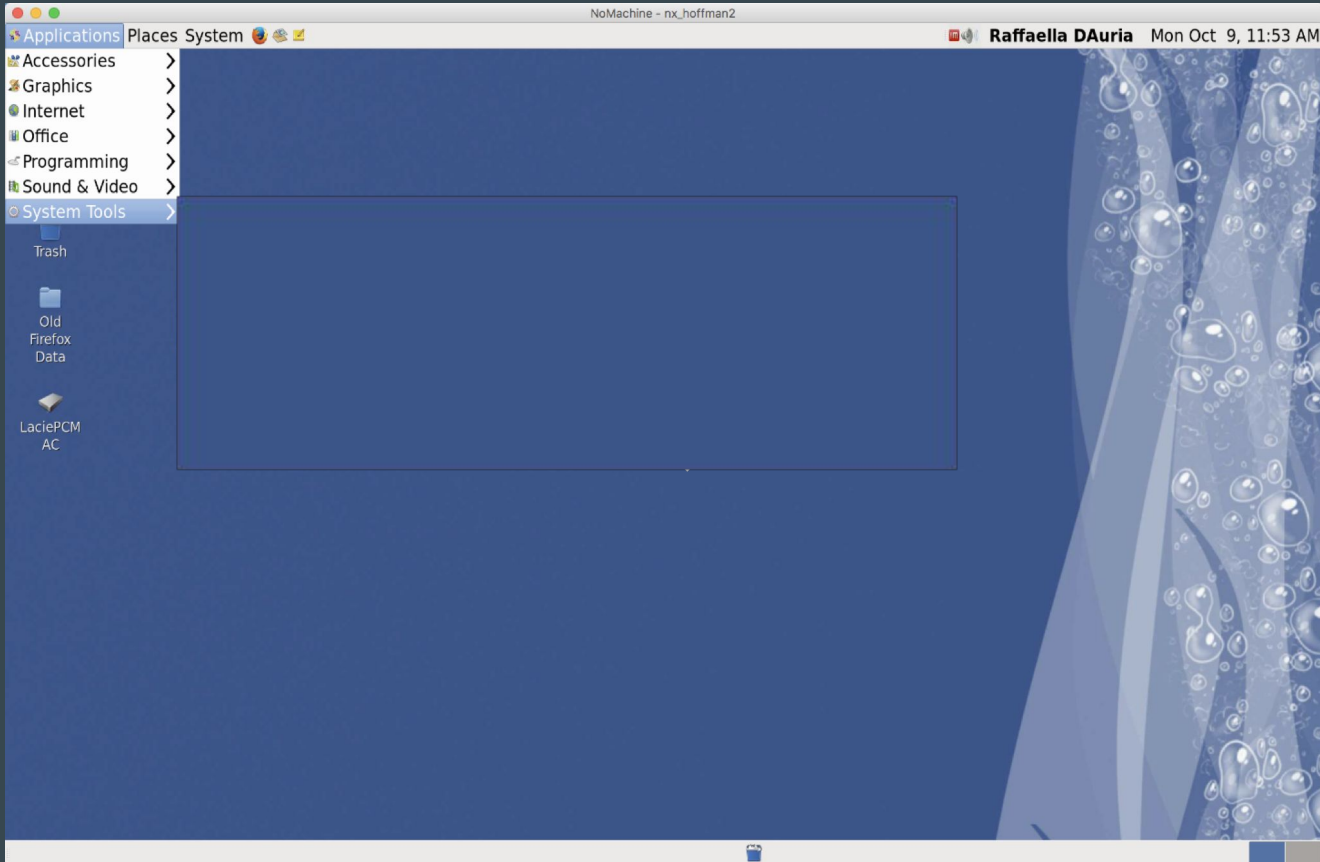
**Note**

macOS users will need to install the XQuartz dependency prior to installing X2Go. It may be obtained on the [XQuartz website](#). You may encounter a security warning prompting you that `x2goclient.app` is from an unidentified developer. Simply right click on the app again and select `Open`. See also [the Mac portion of Opening GUI applications](#).

**Configure the X2Go client to connect to Hoffman2**

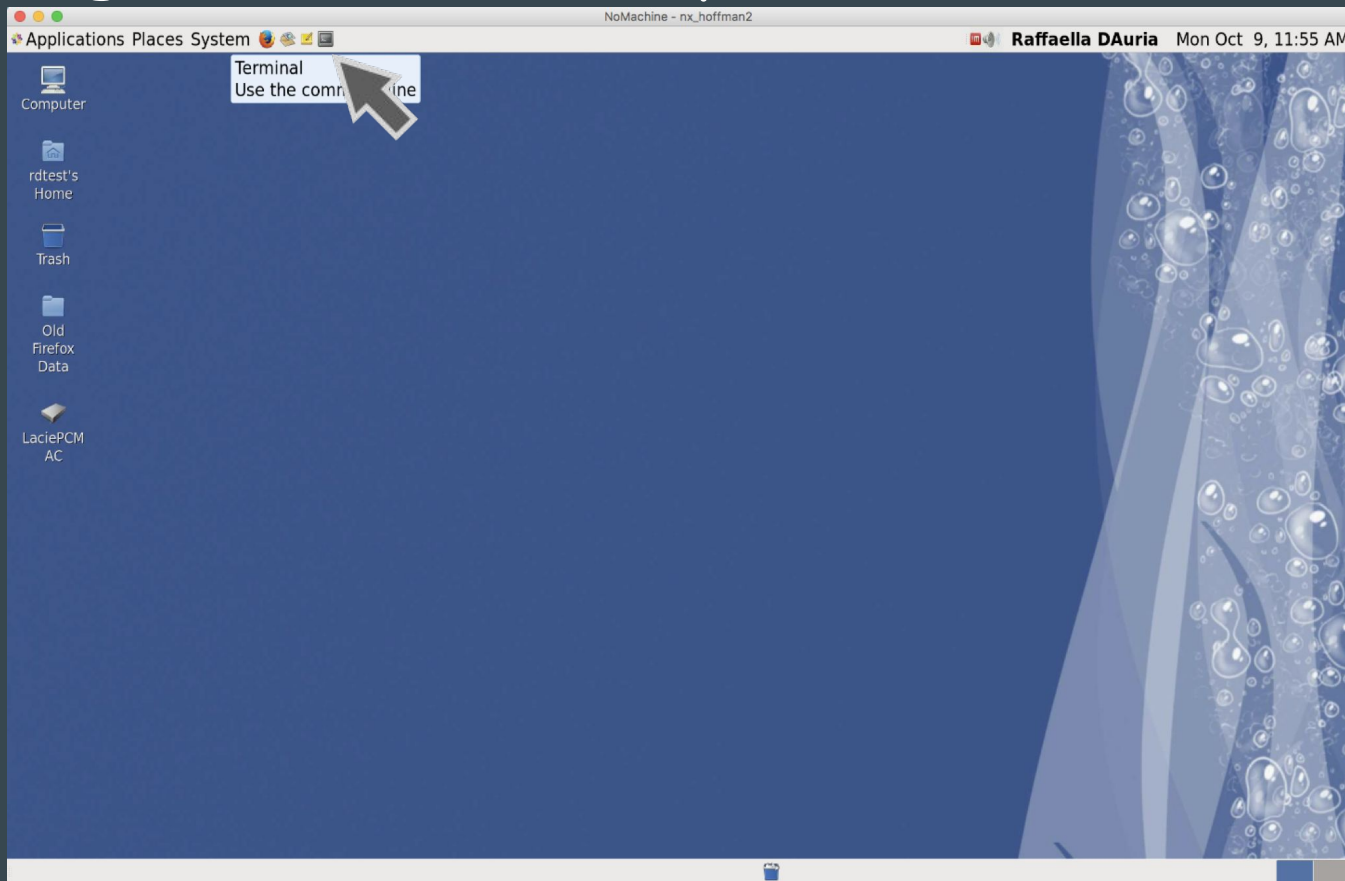
Launch the application by double clicking on the X2Go Client desktop icon, if you have chosen to create one during installation, or by searching for the application in your Applications folder and double clicking on the `x2goclient` icon. If prompted by the Windows Firewall, select `Allow access` so that `sshd.exe` and other X2Go related programs will be able to run.

# Opening a remote desktop on Hoffman2: nomachine

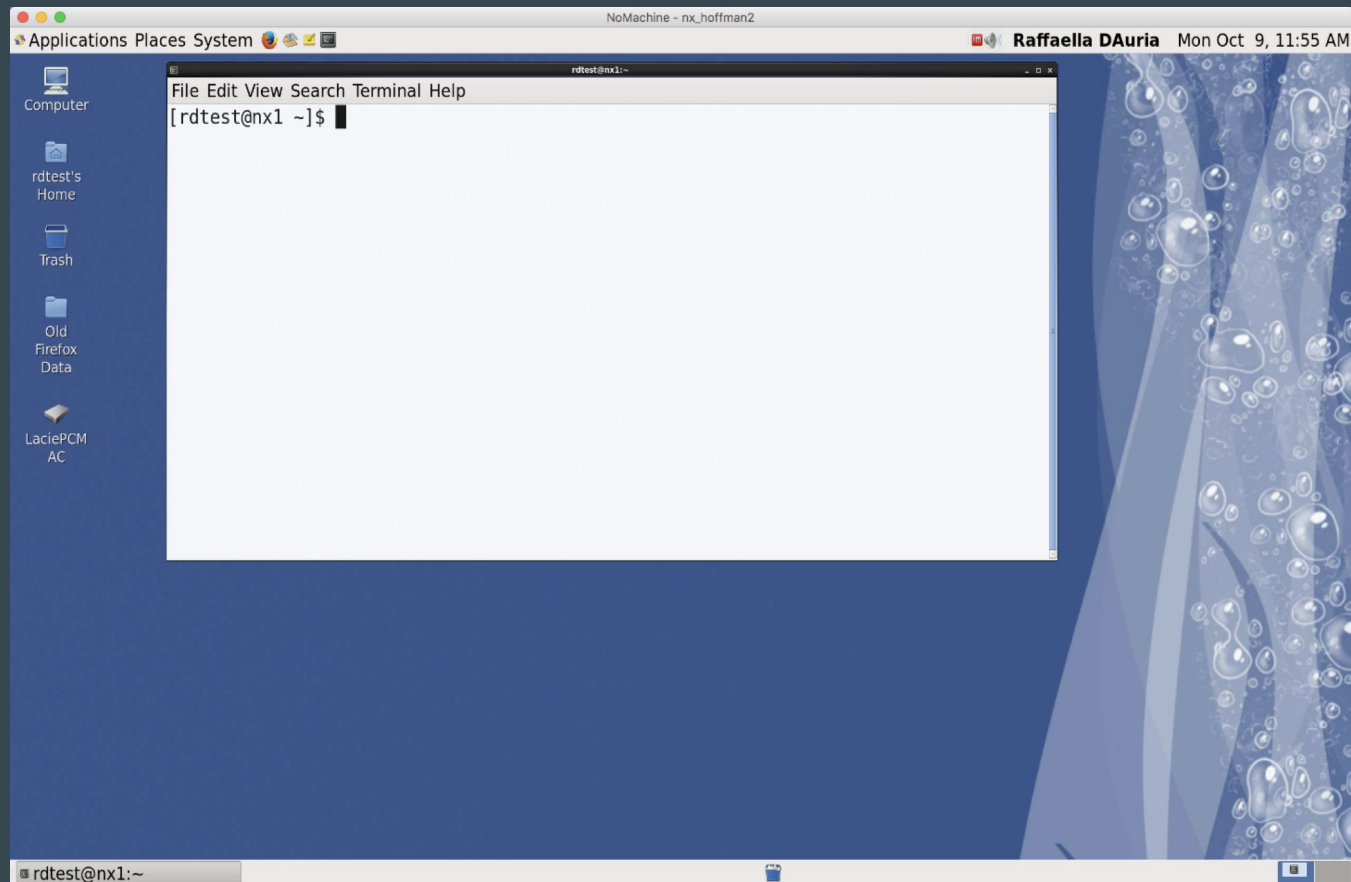




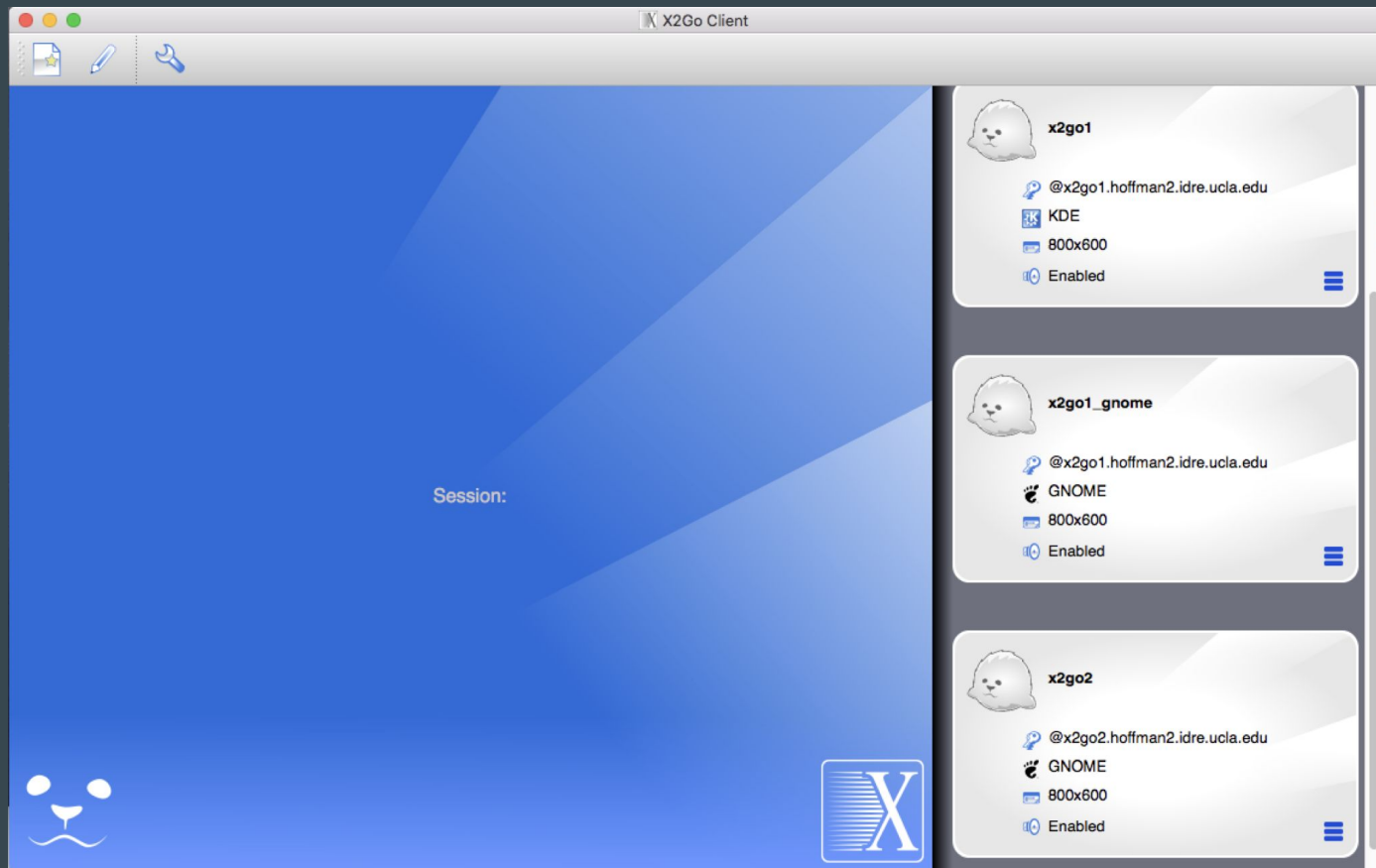
# Opening a remote desktop on Hoffman2: nomachine



# Opening a remote desktop on Hoffman2: nomachine



# Opening a remote desktop on Hoffman2: x2go




# Opening a remote session



Running Apps on H2

Session preferences - New session

Session name:

 << change icon

Path:  ...

Server

Host:

Login:

SSH port:

Use RSA/DSA key for ssh connection:  ...

☐ Try auto login (via SSH Agent or default SSH key)

☐ Kerberos 5 (GSSAPI) authentication

☐ Delegation of GSSAPI credentials to the server

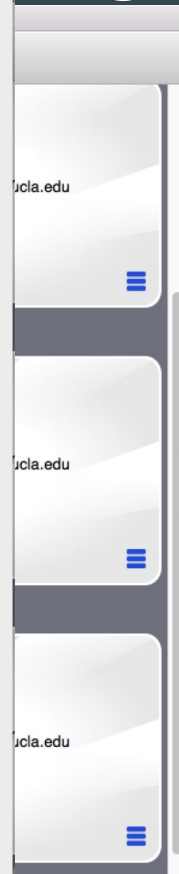
☐ Use Proxy server for SSH connection

Session type

Command:

OK Cancel Defaults

# x2go



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# Opening a remote session



Running Apps on H2

Session preferences - New session

Session name: x2go

<< change icon

Path: /

Server

Host: x2go.hoffman2.idre.ucla.edu

Login:

SSH port: 22

Use RSA/DSA key for ssh connection:

☐ Try auto login (via SSH Agent or default SSH key)

☐ Kerberos 5 (GSSAPI) authentication

☐ Delegation of GSSAPI credentials to the server

☐ Use Proxy server for SSH connection

Session type

KDE

✓ GNOME

LXDE

XFCE

MATE

UNITY

CINNAMON

TRINITY

OPENBOX

ICEWM

Connect to Windows Terminal Server

XDMCP

Connect to local desktop

Custom desktop

Single application

Published applications

Command:

OK Cancel Defaults

x2go



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# Opening a remote session



Running Apps on H2

Session preferences - New session

Session name: x2go

<< change icon

Path: /

Server

Host: x2go.hoffman2.idre.ucla.edu

Login:

SSH port: 22

Use RSA/DSA key for ssh connection:

☐ Try auto login (via SSH Agent or default SSH key)

☐ Kerberos 5 (GSSAPI) authentication

☐ Delegation of GSSAPI credentials to the server

☐ Use Proxy server for SSH connection

Session type

GNOME

Command:

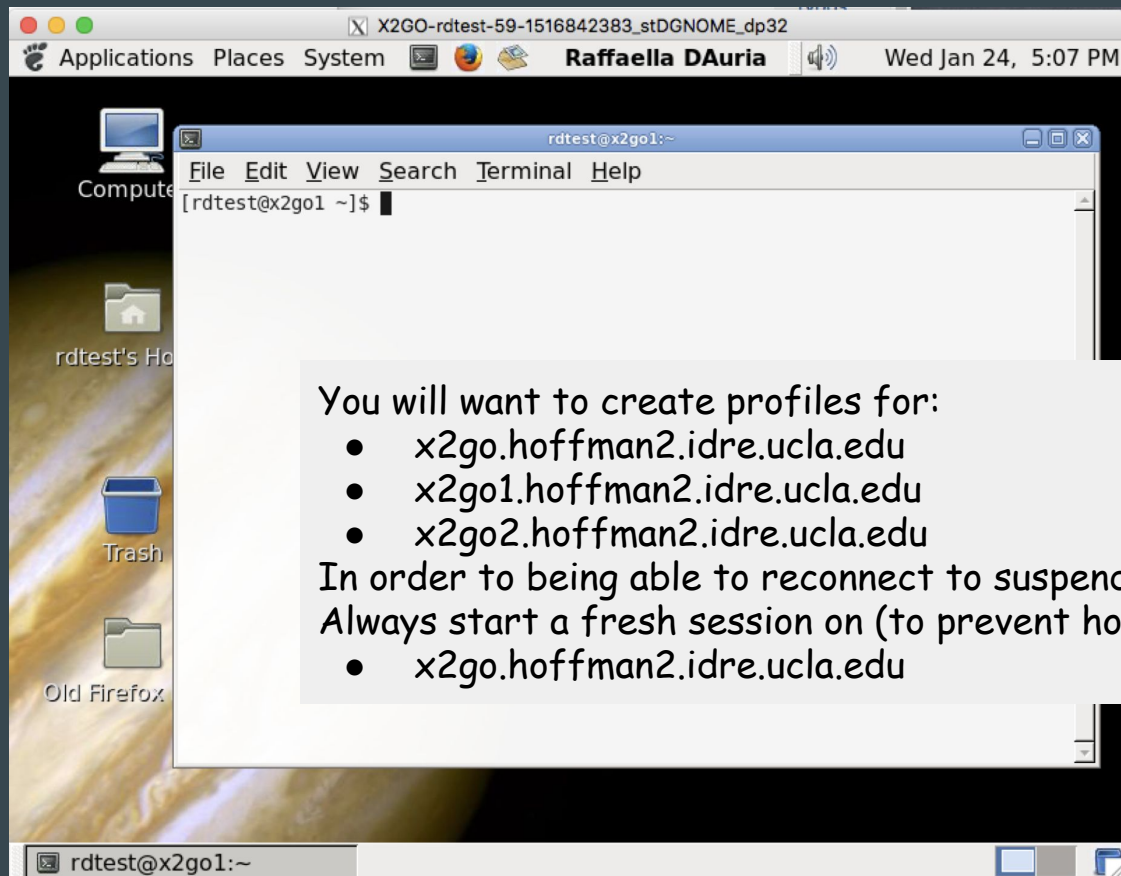
OK Cancel Defaults

x2go



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# Opening a remote desktop on Hoffman2: x2go



You will want to create profiles for:

- x2go.hoffman2.idre.ucla.edu
- x2go1.hoffman2.idre.ucla.edu
- x2go2.hoffman2.idre.ucla.edu

In order to being able to reconnect to suspended sessions.  
Always start a fresh session on (to prevent hot-spots):

- x2go.hoffman2.idre.ucla.edu

# In some cases graphical issues can be fixed with...

*After requesting an interactive session, e.g.:*

```
qssh -l h_data=20G
```

*issue:*

```
export LIBGL_ALWAYS_INDIRECT=1
```