Connecting to WIMM Ubuntu Desktop Working Remotely

If it becomes necessary that you work from home as a result of COVID-19 isolation requirements there are a number of options open to you. In all cases you must ensure that the machines connecting to Institute systems are patched with the latest security updates and are running anti-virus programs that are updating with the latest virus/malware information.

IP addresses in the screenshots in this document have been deliberately obscured.

It is not possible to allow remote connections to multi-user systems within the Institute. Remote access is only possibly from a single remote connection to a single user account on an Institute desktop.

1. If you have a laptop or desktop at home you must use the University of Oxford VPN client when accessing restricted University data and services from your home WiFi. Details of the University VPN can be found at:

https://help.it.ox.ac.uk/network/vpn/index

- 2. If you are transferring confidential or sensitive data from WIMM systems via USB drives or laptops then the data should be encrypted.
- 3. If you wish to access your WIMM server account home and shared folders remotely you will need to use the VPN client in order to log into the WIMM servers via the Windows MicroFocus client or the Macintosh native client.
- 4. If you want to access your WIMM home folder (not lab shared folders) remotely it is also possible to do this via a web interface, see:

https://netstorage.imsu.ox.ac.uk/

Connecting remotely to your Institute Desktop System

If you wish to connect to your desktop computer in the WIMM then please email:

help@imm.ox.ac.uk

to request an account on the WIMM ssh gateway (this will have the same username and password as your University SSO account).

The instructions below describe how to use your WIMM ssh gateway account to make a connection to your Institute desktop system. Instructions are given for Windows, Macintosh and Ubuntu platforms.

It is essential that you know the IP address of the Institute computer you wish to connect to remotely. It is also essential you know the username and password to log on to your Institute desktop, your SSO (Single Sign On) username and password and your Remote access password.

Follow these instructions to find out the IP address of your Ethernet (wired) connection on your Institute desktops:

Ubuntu desktop:

https://help.ubuntu.com/stable/ubuntu-help/net-findip.html.en

Windows desktop:

https://support.microsoft.com/en-us/help/4026518/windows-10-find-your-ip-address

Macintosh desktop:

https://www.wikihow.com/Find-Your-IP-Address-on-a-Mac

To connect from remote (home) Windows PC or Macintosh to an Institute Ubuntu Desktop

On the Institute Ubuntu Desktop

Note the Ethernet IP address of the Institute Ubuntu system.

Open a terminal window and type the following commands:

sudo apt-get update

sudo apt-get upgrade

sudo apt install openssh-server

Check ssh is enabled (active):

sudo systemctl status ssh

	:~\$ sudo systemctl status ssh		
	ssh.service - OpenBSD Secure Shell server		
	Loaded: loaded (/lib/systemd/system/ssh.service; enabled; vendor preset: ena		
	Active: active (running) since Tue 2020-03-10 05:03:34 PDT; 2h 7min ago		
	Main PID: 762 (sshd)		
	Tasks: 1 (limit: 4621)		
_	CGroup: /system.slice/ssh.service		
0	└─762 /usr/sbin/sshd -D		
Λ			
H	Mar 10 05:03:35 ubuntu systemd[1]: Reloading OpenBSD Secure Shell server.		
	Mar 10 05:03:35 ubuntu sshd[762]: Received SIGHUP; restarting.		
	Mar 10 05:03:35 ubuntu sshd[762]: Server listening on 0.0.0.0 port 22.		
	Mar 10 05:03:35 ubuntu sshd[762]: Server listening on :: port 22.		
	Mar 10 05:03:35 ubuntu systemd[1]: Reloaded OpenBSD Secure Shell server.		
	Mar 10 05:03:35 ubuntu systemd[1]: Reloading OpenBSD Secure Shell server.		
►	Mar 10 05:03:35 ubuntu sshd[762]: Received SIGHUP; restarting.		
	Mar 10 05:03:35 ubuntu systemd[1]: Reloaded OpenBSD Secure Shell server.		
	Mar 10 05:03:35 ubuntu sshd[762]: Server listening on 0.0.0.0 port 22.		
	Mar 10 05:03:35 ubuntu sshd[762]: Server listening on :: port 22.		
	lines 1-18/18 (END)		

Install fail2ban:

sudo apt install fail2ban

Check fail2ban is running:

/etc/init.d/fail2ban status



Turn on Desktop sharing from the System Settings – set password for remote authentication

Activiti	es	🐉 Settings 🕶	Wed 06:47	よ ● ① ▼
	٩	Settings	Sharing	
	((1=	Wi-Fi		
9	*	Bluetooth	Computer Name	Γ.
	⊴	Background		
	Q	Dock	Screen Sharing Enabled	
	A	Notifications	Pemote Login Of	
	۹	Search		
	0	Region & Language		
	0	Universal Access		
	€Ds	Online Accounts		
	4	Privacy		
>	<	Sharing		
	_			

ON Screen Sharing 🛛 😣		
Screen sharing allows remote users to view or control your screen by connecting to <u>vnc://</u> <u>ubuntu.local</u>		
Allow connections to control the screen		
Access Options		
\bigcirc New connections must ask for access		
Require a password		
Password:		
□ Show Password		
Networks		
H Wired connection 1 ON		
📲 Wired connection 2 ×		

Enter command as a standard user **do not** sudo

/usr/bin/gsettings set org.gnome.Vino require-encryption false

On Remote (home) Windows Desktop

On your home Wifi you will need to use Oxford University VPN connection:

https://help.it.ox.ac.uk/network/vpn/index

Download and install VNCViewer:

https://www.realvnc.com/en/connect/download/viewer/

In administrator command prompt enter:

ssh SSO_username@sshgw.imm.ox.ac.uk -L 5901:IP_Address_of_Ubuntu_Desktop:5900

Prompted for SSO password (the IP address has been obscured)



You could put this command in a batch file.

Open VNCViewer

Enter

localhost:5901

V2 VNC Viewer	-		×
File View Help			
by RealWNC localhost:5901		Sign in.	•
There are no computers in your address book at present.			
Sign in to your RealVNC account to automatically discover team computers.			
Alternatively, enter the VNC Server IP address or hostname in the Search bar to connect direct	ly.		

Press Return

You may see the following prompt:

V2 VNC Viewer	- 🗆 ×
File View Help	
VNC CONNECT by RealVNC localhost:5901	
Ve localhost:5901 - VNC Viewer — — ×	
₩ Encryption ×	
H Unencrypted connection	
The connection to this VNC Server will not be encrypted.	
VNC Server: localhost::5901 (TCP)	
Your authentication credentials will be transmitted securely, but all subsequent data exchanged while the connection is in progress may be susceptible to interception by third parties.	
🗌 Don't warn me about this again.	
Continue	
A Stop	

Tick Don't warn me about this again and click Continue

You will then see a prompt for the Ubuntu Screen Sharing password

	тие чем тер		
	VNC CONNECT by RealVNC	localhost:5901	Sign in
ion orat			
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12.3		Image: Nocalhost:5901 - VNC Viewer Image: Nocalhost:5901 - VNC Viewer Image: Nocalhost:5901 - VNC Viewer Image: Nocalhost:5901 (TCP) Image: N	

This is the password you configured on the Institute Ubuntu desktop window below (this password may be different from the one you use to log into the user account on the machine):



Enter the password to display your Ubuntu desktop on your Windows PC:



When you have finished your remote session to your Institute desktop it is essential that you exit the ssh gateway by typing exit:



Last login: Wed Mar 11 11:52:29 on ttys000 [lmmproeth0:~ lcm\$ ssh lynne@sshgw.imm.ox.ac.uk -L 5901:129.67.56.124:5900 [lynne@sshgw.imm.ox.ac.uk's password: Last login: Wed Mar 11 14:42:55 2020 from lmmproeth0.imm.ox.ac.uk [[lynne@sshgw ~]\$ exit logout Connection to sshgw.imm.ox.ac.uk closed. lmmproeth0:~ lcm\$

On your home Macintosh Desktop

On your home Wifi you will need to use Oxford University VPN connection:

https://help.it.ox.ac.uk/network/vpn/index

Open a terminal window:

ssh SSO_username@sshgw.imm.ox.ac.uk -L 5901:IP_Address_of_Ubuntu_Desktop:5900



Open screen sharing application on the Macintosh

Macintosh HD > Library > CoreServices > Applications > Screen Sharing

	Screen Shar	ing	
Connect To:	Hostname or Apple ID		
		Cancel	Connect

Enter

localhost:5901

You will then be prompted for the Ubuntu Screen Sharing password:

Screen Sharing requires your password to sign in to "localhost".
Remember password Cancel Sign In

This is the password you configured on the Institute Ubuntu desktop window below (this password may be different from the one you use to log into the user account on the machine):

ON Screen Sharing 🛛 😣
Screen sharing allows remote users to view or control your screen by connecting to <u>vnc://</u> <u>ubuntu.local</u>
Allow connections to control the screen
Access Options New connections must ask for access Require a password
Password:
Show Password
Networks
🛔 Wired connection 1

The Ubuntu desktop will then be displayed on your Macintosh desktop.

When you have finished your remote session to your Institute desktop it is essential that you exit the ssh gateway by typing exit:

