



Nuffield Department of Primary Care Health Sciences

ORCHID HERC-CPRD Research Service

Connection and setup documentation

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Accessing Primary Care Health Sciences ORCHID Platform

Introduction

The Primary Care Health Sciences ORCHID HERC Platform is provided to aid researchers working on CPRD data.

The service provides access to a virtual desktop ORCHID Open network. Data is held locally to this desktop on a separate drive (D:\ Drive) with access available based on security groups.

The HERC virtual desktops are accessible from your physical device and provides access to HERC CPRD datasets, compute services and storage services. You can access your local drives via the remote desktops through drive redirection to facilitate transfer of scripts and results data. Access to the internet is permitted, although additional applications should not be installed directly on the virtual desktops, these should be requested via the PHC IT Team.

Data and scripts for your research project should be stored in the relevant D: drive folder, only store what you need to do your work on the data in the D drive and your local profile (Documents folder on the virtual desktops).

User guide

This guide will take you through the steps for setting up your access to the Primary Care Health Sciences ORCHID HERC platform and provide access to the various remote desktops.

In order to follow this guide you will need the follow:

- a Microsoft Windows based computer running Windows 10 or an Apple Mac running OSX 10.9 or greater with access to the internet
- an Android running version 7.1 or greater or an iPhone running iOS version 12 or above, or a mobile with SMS text ability
- VPN connection either via MSD VPN or the Oxford IT Services VPN

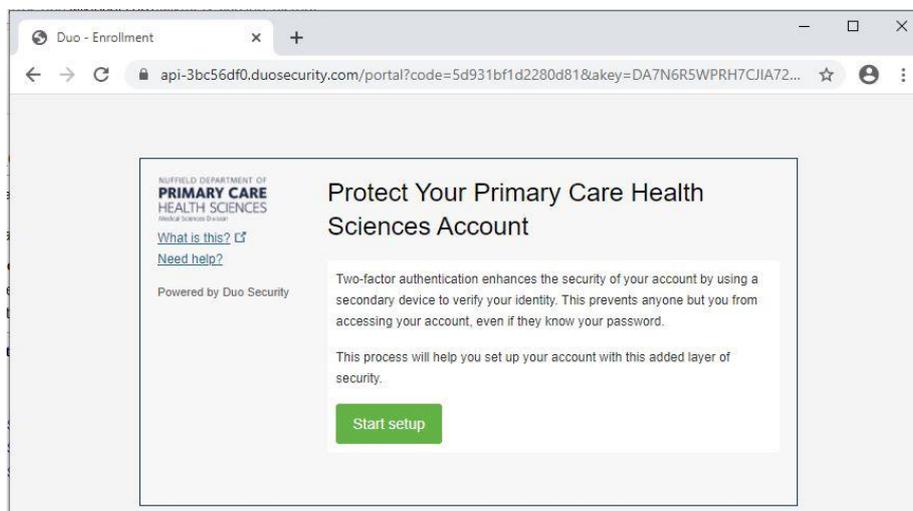
Additionally on Mac OSX you need to install the 'Windows App' from the Apple App store.

Setting up your DUO app

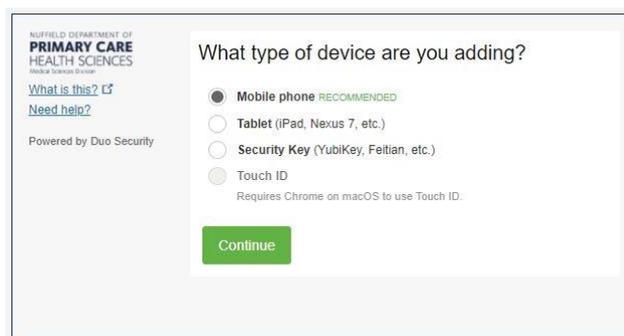
As part of the login requirement for ORCHID, we have implemented a two factor authentication for the login process using a product called DUO. As part of the on-boarding process you will have received an email from Duo Security no-reply@duosecurity.com inviting you setup your Duo access app.

First install the Duo Mobile app from your App store (App store for iOS, Google Play for Android)

Clicking on the link in the email takes you to the following website



Click on 'Start Setup' to proceed to the following screen:



Select the type of device you want to use. It is recommended to use the 'Mobile phone' option but if you don't want to provide a mobile number you can select the 'Tablet' option. By using the mobile option and entering your phone number you are able to request codes via SMS text message as an additional option.

The screenshot shows the 'Enter your phone number' screen. On the left, there is a logo for 'SUFFIELD DEPARTMENT OF PRIMARY CARE HEALTH SCIENCES' and links for 'What is this?' and 'Need help?'. Below the logo, it says 'Powered by Duo Security'. The main content area has a title 'Enter your phone number'. There is a dropdown menu for 'United Kingdom'. Below that, a text input field contains '+44 1234 567890' with a green checkmark to its right. An example number '121 234 5678' is shown below. A checkbox is checked, with the text 'You entered 01234 567890. Is this the correct number?'. At the bottom, there are 'Back' and 'Continue' buttons.

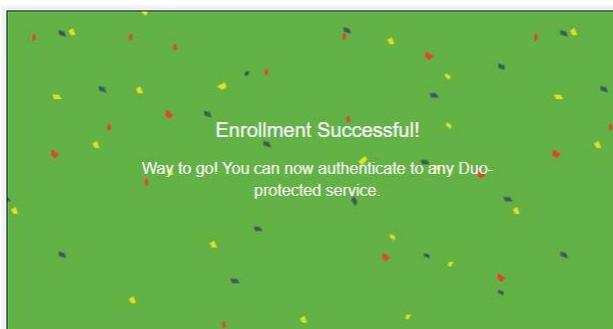
Enter your mobile number and choose the correct county from the drop down list. Note you don't need to enter the initial '0' on the phone number. If you have chosen not to provide a mobile number move on to 'Using the 'Tablet' option in Duo'.

The screenshot shows the 'Verify Ownership of +44 79 1234 5678 21' screen. On the left, there is a logo for 'SUFFIELD DEPARTMENT OF PRIMARY CARE HEALTH SCIENCES' and links for 'What is this?' and 'Need help?'. Below the logo, it says 'Powered by Duo Security'. The main content area has a title 'Verify Ownership of +44 79 1234 5678 21'. Below the title, there are two steps: '1. We can text you with a verification code.' with a 'Text me' button and 'Text sent' text, and '2. Enter your 6-digit code:' with a text input field containing '7 8' and a 'Verify' button. At the bottom, there are 'Back' and 'Continue' buttons.

You will receive a text message to your mobile number containing a 6 digit code. Enter this into the box and click 'Verify' before moving on. This ensures the mobile number you entered is the device you have.

The screenshot shows the 'My Settings & Devices' screen. On the left, there is a logo for 'SUFFIELD DEPARTMENT OF PRIMARY CARE HEALTH SCIENCES' and links for 'What is this?' and 'Need help?'. Below the logo, it says 'Powered by Duo Security'. The main content area has a title 'My Settings & Devices'. Below the title, there is a box for 'iOS +44 791 234 5678 21' with 'JUST ADDED' text. Below that, there is a 'Default Device:' dropdown menu showing 'iOS +44 791 234 5678 21'. Below that, there is a 'When I log in:' dropdown menu showing 'Automatically send this device a Duo Push'. At the bottom, there are 'Save' and 'Finish Enrolment' buttons.

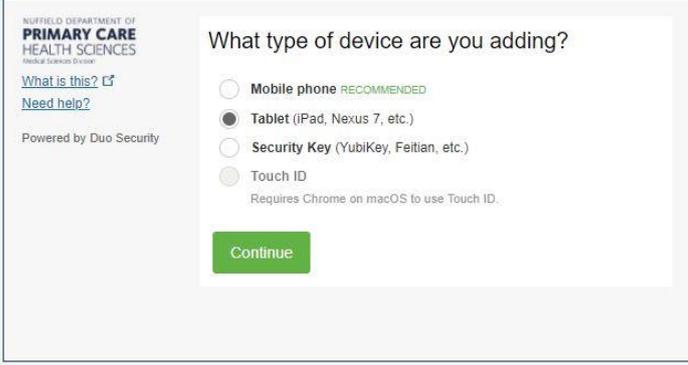
You'll now be asked for your preferred default prompt for authentication. Choose either 'Ask me to choose an authentication method', which will prompt for the method each time you log on, or 'Automatically send this device a Duo Push' to have your device automatically prompt you to confirm your login. Once chosen click 'Finish Enrolment'.



Your Duo account is setup, move to the section 'Downloading the Remote Desktop configuration file'.

Using the 'Tablet' option in Duo

If you don't want to supply your mobile number simply select 'Tablet' when asked what type of device you are using.



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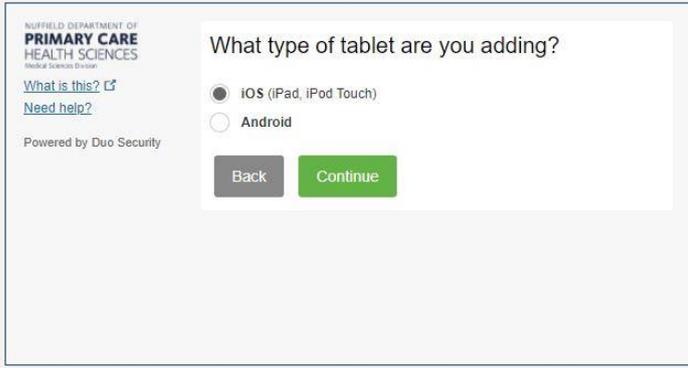
Powered by Duo Security

What type of device are you adding?

- Mobile phone RECOMMENDED
- Tablet (iPad, Nexus 7, etc.)
- Security Key (YubiKey, Feitian, etc.)
- Touch ID
Requires Chrome on macOS to use Touch ID.

[Continue](#)

Click next to take you to the following screen



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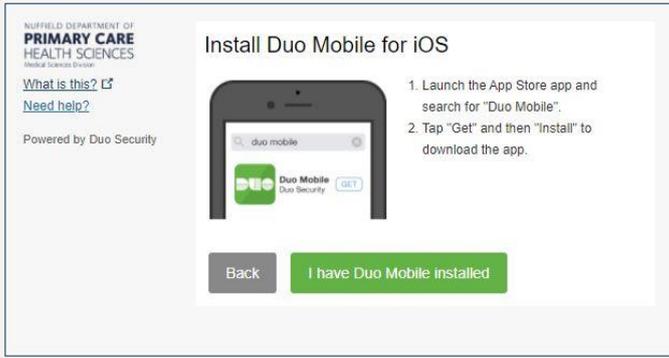
Powered by Duo Security

What type of tablet are you adding?

- iOS (iPad, iPod Touch)
- Android

[Back](#) [Continue](#)

Select your tablet/phone version and click 'Continue'



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Powered by Duo Security

Install Duo Mobile for iOS



1. Launch the App Store app and search for "Duo Mobile".
2. Tap "Get" and then "Install" to download the app.

[Back](#) [I have Duo Mobile installed](#)

You'll be prompted to install DUO from your app store (if you haven't done this yet please do so now). Once completed click on 'I have Duo Mobile installed'.



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Powered by Duo Security

Activate Duo Mobile for iOS

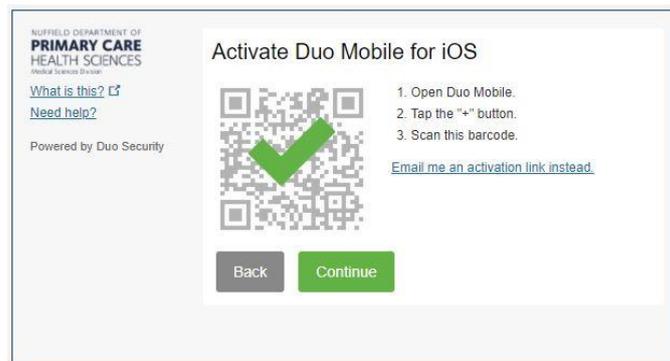


1. Open Duo Mobile.
2. Tap the "+" button.
3. Scan this barcode.

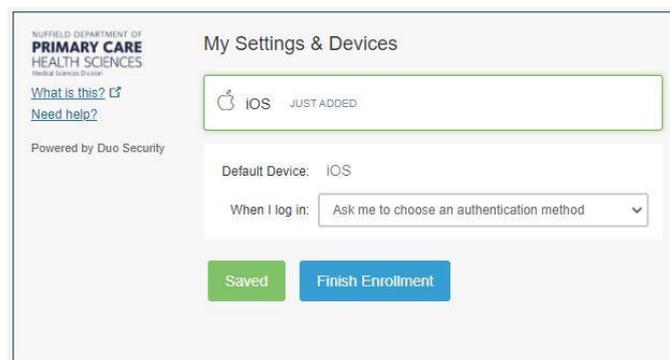
[Email me an activation link instead.](#)

[Back](#) [Continue](#)

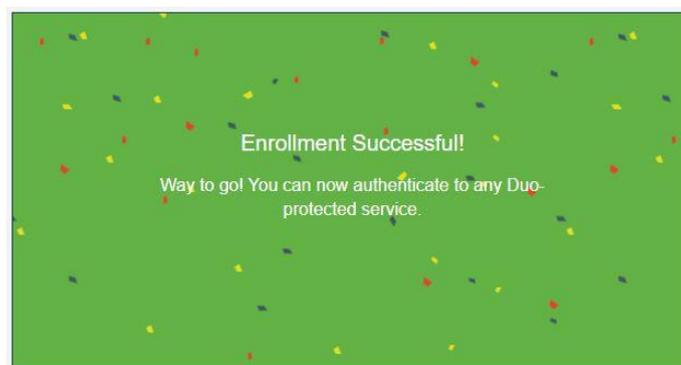
Open the Duo Mobile app on your device and press the '+' icon at the top of the display to add a new account. If you're prompted to allow the device to notify you and access your camera please allow these. Point the phone camera at the QR screen to setup your App.



Once scanned you will see the green tick, click on 'Continue'



You'll now be asked for your preferred default prompt for authentication. Choose either 'Ask me to choose an authentication method', which will prompt for the method each time you log on, or 'Automatically send this device a Duo Push' to have your device automatically prompt you to confirm your login. Once chosen click 'Finish Enrolment'.



Your Duo account is now setup.

Changing your DUO device or reporting issues

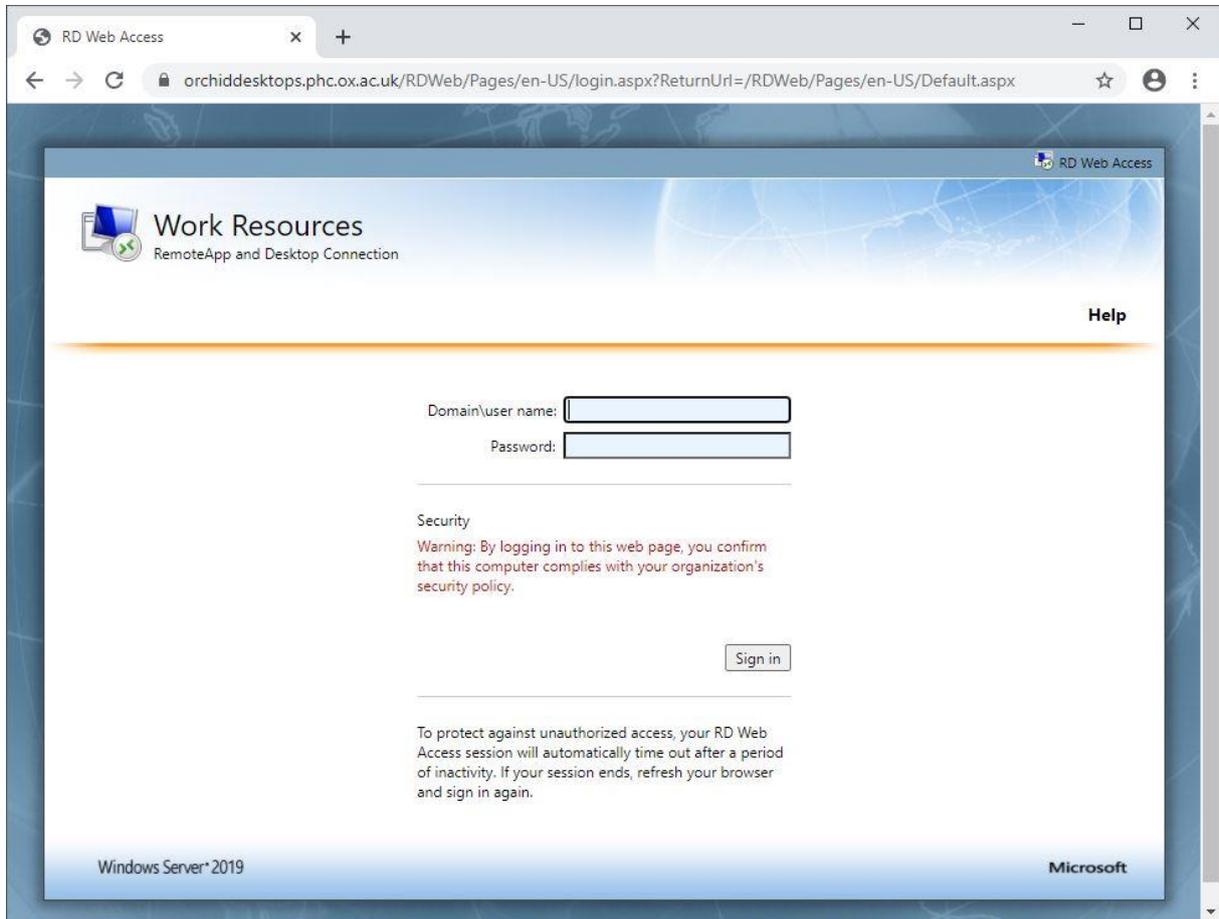
Should you need to change the device you are using for your Duo MFA, please contact the ORCHID IT support team via it-support@phc.ox.ac.uk email address.

If you think your DUO account or device have become compromised or lost/stolen, you **must** contact the datasecurity@phc.ox.ac.uk email address as soon as possible so the device can be disabled within 24 hours of the incident.

Downloading the Remote Desktop configuration file

Before continuing, please ensure you are connected to either the [Oxford University VPN](#) or the [MSD IT VPN](#) service, or you are connected to the wired network at the department.

To connect to ORCHID you will use Remote Desktop Protocol (RDP) connection files, as this provides the most flexibility for controlling the size of the display and other options. To download the RDP settings file visit <https://orchiddesktops.phc.ox.ac.uk/RDWeb> from any web browser. You will see the following web page:



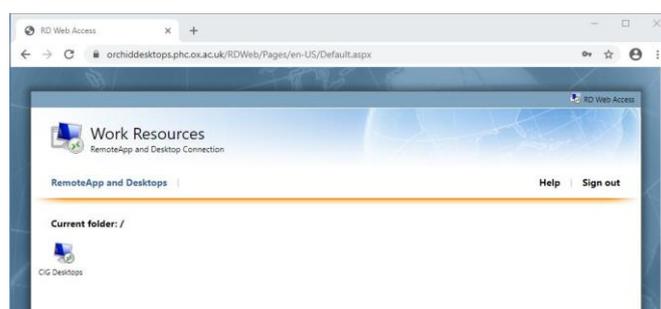
Use your ORCHID username and password in the following format:

- Username: orchid\Your given username
- Password: The initial password provide to you

Domain\user name:

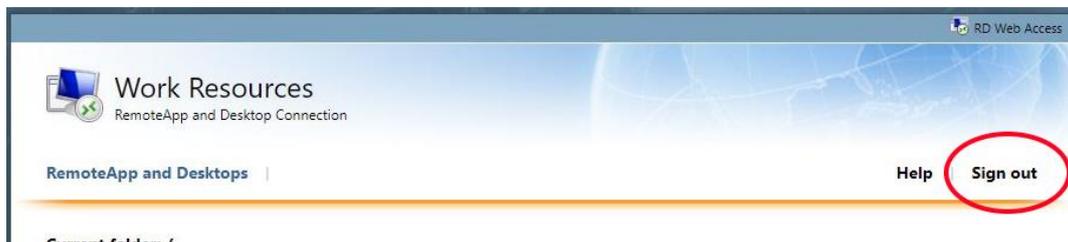
Password:

Once you have entered the correct username and password you'll then be shown the desktops you have access to as follows. Note the exact desktops can change over time depending on which services you might be accessing.



Click on a desktop icon to download the corresponding connection file to your computer. For Windows 10 and Apple Mac machines this is normally to your 'Downloads' folder.

You can now click on the 'Sign out' option at the top of the web page as you have downloaded the connection file.



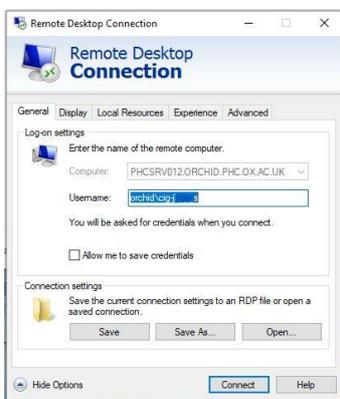
Connecting to your desktop

Before you connect to your desktop we recommend you move the file from the Downloads folder to another location, perhaps your desktop or an alternative location within 'Documents' for example.

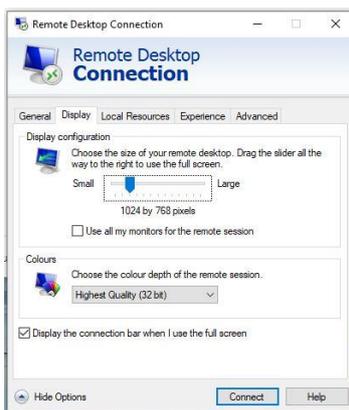
Once you have moved the connection file we recommend you edit this file to change the resolution of the display to something suitable for your working pattern. By default the connection file will open full-screen across up to 2 monitors, which may not be the best configuration depending on how you like to work.

On Windows machines

Locate your RDP file and right click for the context menu, select 'Edit'. The connection details will be displayed (see below)



Click on the 'Display' tab to show the following:



Change the Display configuration slider to a suitable resolution and select the check box if you want to use all monitors (up to a maximum of 2) when in full screen mode.

If you're on a slower link reducing the Colours may help improve responsiveness.

Click on the 'General' tab and click 'Save' to save these changes to the file so the next time you connect it will use these settings. If you want you can also enter the username into the 'Username' field, remembering to use the 'orchid\your username' format.

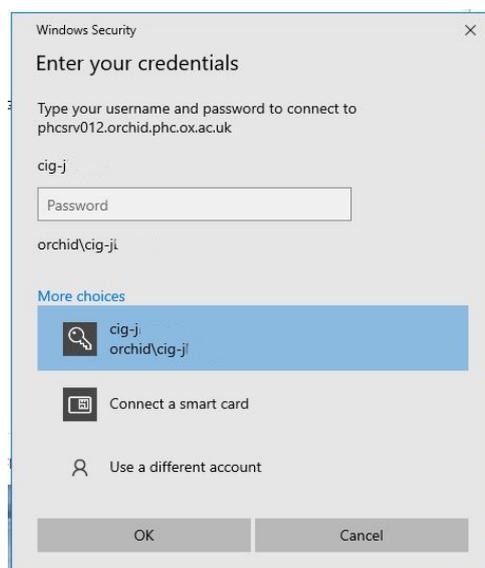
Once you have made the necessary changes clicking on 'Connect' will start the connection process. You'll be prompted to 'trust' the connection as follows:



Click the radio button to not prompt again if you wish, then click 'Connect'.



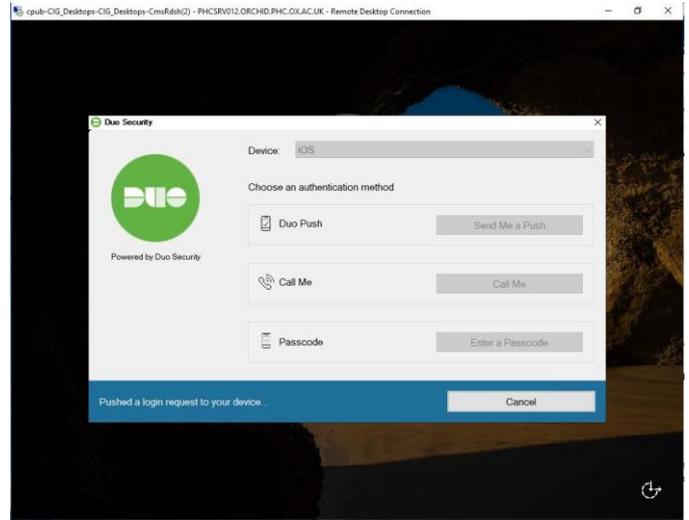
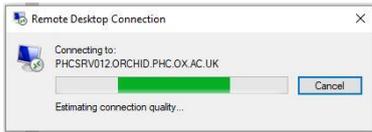
This window is now asking for your password. Check that the correct username is shown, if not click on 'More choices', then on 'Use a different account' (you may need to scroll this window down to reveal this option) which will then allow you to enter your new details into the 'Username' field (remember to use the orchid\your username format).



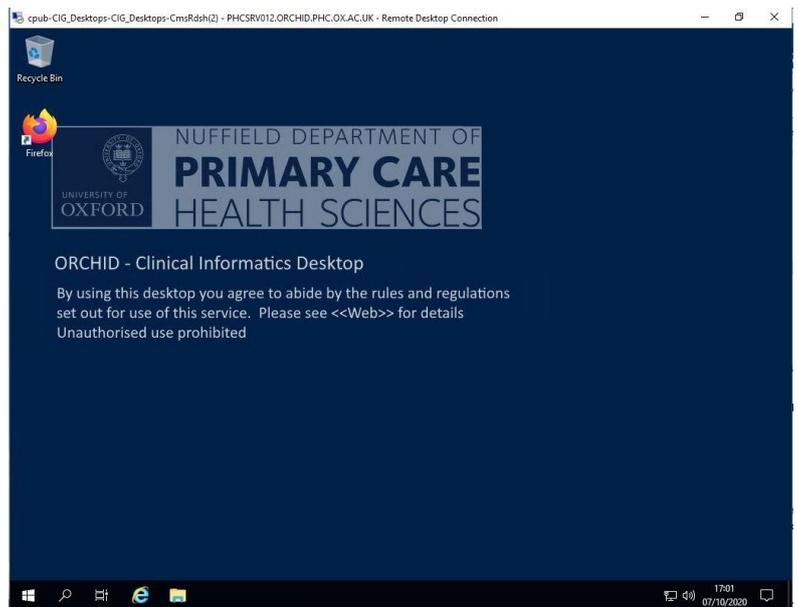
Once you have your username and password entered, click on 'OK' to open the connection.



You'll see this window appear as it starts the connection then finally the desktop will appear.



Select your chosen method for authentication (if you haven't set it to automatically push) and then respond to the request for the method, then use the Duo app on your mobile (or enter the text code) to complete the logon process.

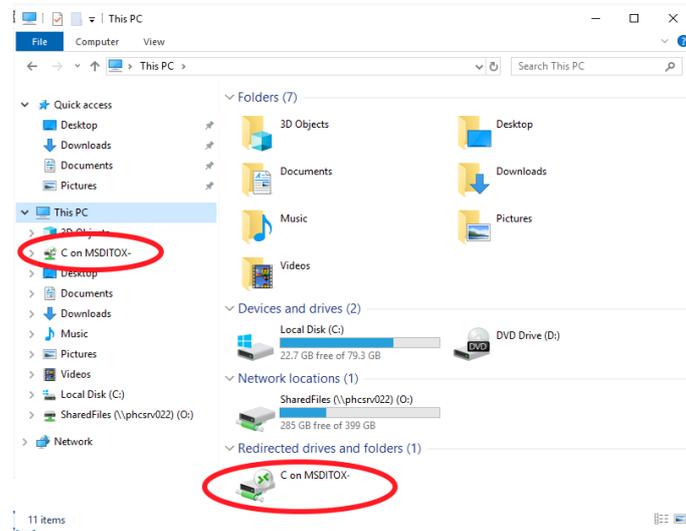


Congratulations you have successfully logged into your ORCHID desktop.

Accessing Local Drives

When using the HERC Windows Desktop you are able to connect local drives to the virtual machine to allow for the transfer of data to and from the Open Desktop.

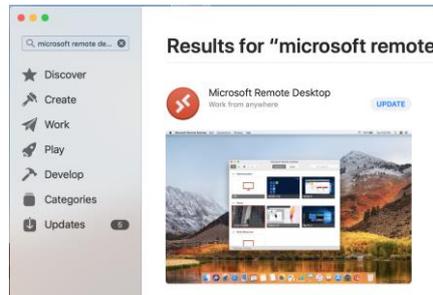
To access your local drives, look for the drive letter within Windows Explorer on the virtual desktop, for example below you can see the C: drive on the local machine.



Clicking on this icon will show you your local C drive within the Open Desktop. Please note transfers to the virtual desktop will depend on your current internet connection, and is dictated by how fast your upload link is.

On Apple Mac machines

Ensure you have the Microsoft Remote Desktop client.

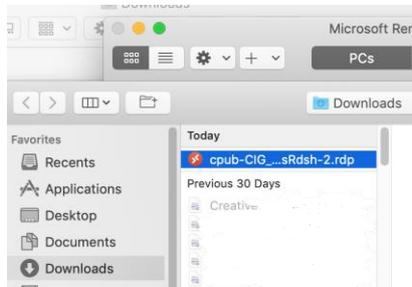


Once installed, you can open RDP files directly by double-clicking on the icon, or import settings into Microsoft Remote Desktop client. Our recommendation is to import the files as you can then modify the settings (resolution etc) and keep these settings between connections.

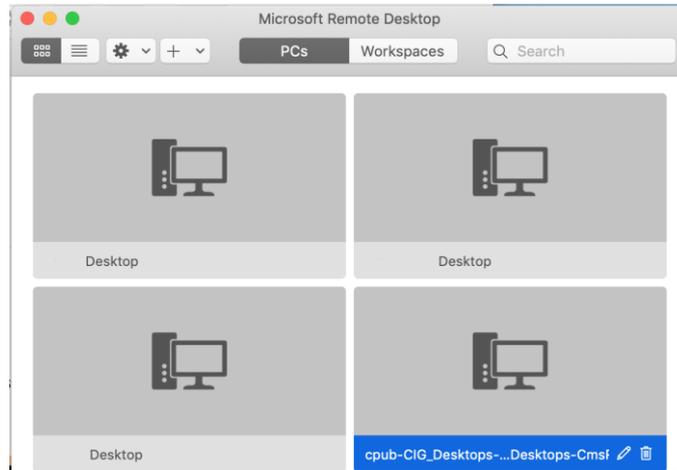
To import the RDP file, open Microsoft Remote Desktop, from the menu, select 'Connections | Import from RDP file...'



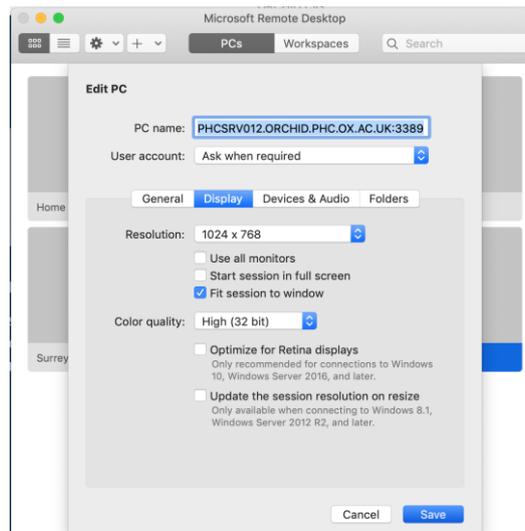
Select the RDP file downloaded from the ORCHID desktop website



Clicking on 'Import' will bring the RDP settings into the client.



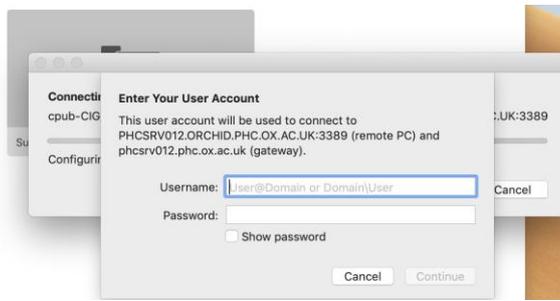
To edit the settings, select the desktop and click on the 'pencil' icon. This will open the settings dialog and allow you to change, for example, the screen resolution.



Please ensure you don't change the 'PC name' field at the top, or any of the 'Gateway' settings as this will prevent you from connecting to the desktop. Also the ability to enable Cut & Paste (under Devices & Audio) or enable folder redirection (Folders tab) is only available on the Open desktops. These settings are ignored for any CIG desktops.

Once you have completed any changes, click on the 'Save' button. These will now be default for any future sessions.

To connect to the desktop, double-click the RDP connection you want and you'll be prompted to enter your username and password:



Enter your password ensuring that this is in the format below

orchid**<YOUR ORCHID USERNAME>**

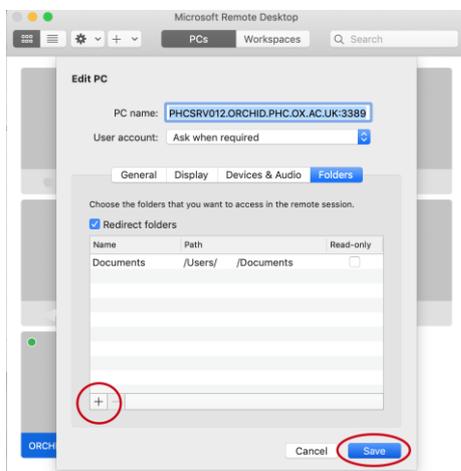
Then use the password for your ORCHID account. Your connection will then be made and you will be prompted for your DUO MFA authentication in the same way as for the Windows instructions previously.

Accessing Local Drives on the Mac

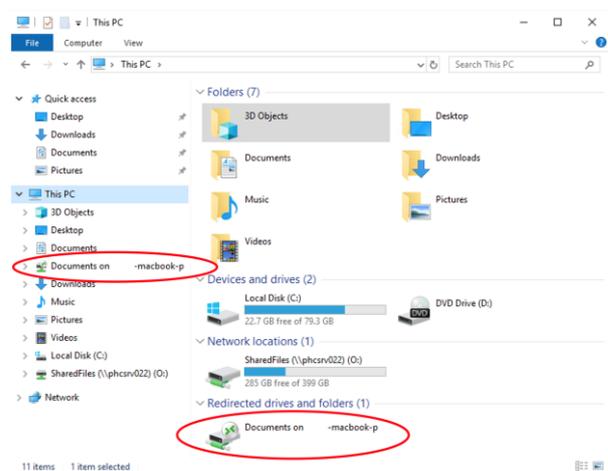
When using the Open Desktop you are able to connect local drives to the virtual machine to allow for the transfer of data to and from the Open Desktop. This feature is only available on the Open Desktop, no other desktop supports this. If you want to move a file to your CIG desktop, first upload this to your Open Desktop then use the Web Transfer service from the Open Desktop to submit this file for transfer approval (see Web Transfer later in this guide).

You need to setup your RDP connection by choosing the folder or drive to share. Edit your RDP file and select the 'Folders' tab. Pick the required folder or drive from the chooser window (click on the '+') and click 'Save' when done.

To access your local drives, look for the drive letter within Windows Explorer on the virtual desktop, for example below you can see the C: drive on the local machine.



1. Pick your required folder



2. Access from within the Open Desktop

Accessing computational resources

R Studio Server

This has been installed on the virtual desktop and can be accessed via the Windows Start menu.

Notes on using your ORCHID desktop

Changing your ORCHID password

You can change your ORCHID password from the virtual desktops by pressing 'Ctrl-Alt-End' to bring up the lock screen, then click on 'Change a password'. You'll need to enter your current password and then your new password (twice). Please remember to use at least one letter, one number and a symbol, plus its best practice to mix capitalisation as well.

If you are using a Mac, you can use the 'Ctrl-Alt-Fn-Backspace' key combination to bring up the same menu.

Changing your ORCHID password via the Web

You can also change your ORCHID password via the following website from your own computer.

<https://orchiddesktops.phc.ox.ac.uk/RDWeb/Pages/en-US/password.aspx>

You will need to be connected to either the Oxford central IT VPN or the MSD VPN.

Changing an expired ORCHID password

All ORCHID passwords expire after 90 days as part of the security requirements. You can change your password anytime within the 90 days by using either of the two options above, however if you find your ORCHID password has expired, you won't be able to log onto the desktops until you change it. You can use the same web link shown above to change an expired password. Once changed you can then log back on to your ORCHID desktops.

The system will also send a reminder email when your password is due to expire reminding you to change this before the last day. These are normally sent to all accounts due to expire in the next 21 days. Make sure these emails don't fall into your 'Junk' mail.

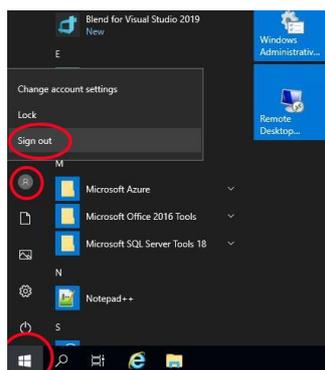
Logging off the remote desktops

When using your desktop you may find the screen will lock and require you to re-enter your ORCHID password, and also re-enter your Duo passcode. This is part of the security features setup on the ORCHID platform to ensure data is secure from unauthorised access.

When you have finished using your ORCHID desktop please ensure you log off the desktop rather than disconnecting as this will free up resources for other users. If you are running a long computation of another similar process then you can disconnect from the desktop (click on the 'X' in the top right) and your process will continue to run. To re-connect simply open your RDP connection again to retrieve your desktop as it was.

Once you have finished your computation please ensure you log off the desktop to free the resources.

To log off, select the 'Windows' icon in the bottom left of the remote desktop window, click on the 'person' icon and choose 'Sign out' (see screen below).



File storage within ORCHID

The different ORCHID desktops all provide a small amount of local personal file storage which can be used via the normal Windows Documents folder. Any files stored here are only available to your user account via the same desktop pool. It is not possible to share files from this location, and each separate desktop pool has its own, separate Documents folder with the following sizes:

Desktop pool	Maximum 'Documents' capacity
Open HERC Desktops	20GB

The HERC Desktop has a local drive used to store files and data as follows:

Share drive	Usage	Permissions
D:	Local storage on the desktop setup for storing CPRD data and other files	All users have access to the General folder

Service maintenance windows

There are regular maintenance windows for all the various services and systems that power ORCHID and can be found at the ORCHID website.

The main service window you are most likely to notice is the one for applying updates to the virtual desktops. This is scheduled on the fourth weekend of each month and will involve a restart of all the virtual desktops within ORCHID. Please ensure you have saved all work and not running any long computation jobs on the Friday before the fourth weekend as these restarts are automatic and cannot be stopped.

Please look out for emails announcing these maintenance windows around the beginning of the 4th week of each month. These emails will confirm the services that are affected and the duration of the outage.