

Nuffield Department of Primary Care Health Sciences

ORCHID-E Research Service

Connection and setup documentation

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Introduction

The Primary Care Health Sciences ORCHID-E Platform is provided to aid researchers working on Epidemiology data.

The service provides access to a number of different virtual desktops and other services located in the ORCHID-E network. Data is held within a central Microsoft SQL Server database with connectivity provided via ODBC on the various compute platforms.



Figure 1, ORCHID-E services for end users

The two networks provide access to different services, data and external connections. The 'Open' network is accessible from your physical device via the remote desktops and provides access to non-personal aggregated datasets and storage services, and allows data to be uploaded and downloaded to your local device through the use of the 'Drive redirection' options available through the Remote Desktop Protocol.

The ORCHID-E network is the secure service and provides a similar set of data, desktop and compute services which can be used to work on the healthcare data which you are provided access to. The ORCHID-E network does not permit ANY connection to external services or storage, for example, there is no general web access and no method to access cloud storage or local drives on your personal device. The only storage available to the desktops is via shared folders that are within the ORCHID-E secure network, and a small amount of personal folder storage on the virtual desktops.

To transfer data we provide the 'Web Transfer' service. This allows data to be submitted for approval to transfer between the two networks. This is the ONLY supported transfer method for data to be taken in or out of the ORCHID-E network.

User guide

This guide will take you through the steps for setting up your access to the Primary Care Health Sciences ORCHID-E 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 11 or an Apple Mac running OSX 10.15 or greater with access to the internet
- an Android running version 11 or greater or an iPhone running iOS version 16 or above, or a mobile with SMS text ability
- VPN connection either via MSD VPN, Oxford IT Services VPN or ORCHID VPN

Additionally on Mac OSX you need to install the Microsoft 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 <u>no-reply@duosecurity.com</u> 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:

What is this? If Meed help? Powered by Duo Security	Mobile phone RECOMMENDED Tablet (iPad, Nexus 7, etc.) Security Key (YubiKey, Feitian, etc.) Touch ID Requires Chrome on macOS to use Touch ID. Continue	

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.

PRIMARY CARE HEALTH SCIENCES	Enter your phone number
What is this? I st Need help?	United Kingdom 🗸
Need help? Powered by Duo Security	+44 1234 567890 Example: 121 234 5678 Vou entered 01234 567890. Is this the correct number? Back Continue

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'.

PRIMARY CARE HEALTH SCIENCES	Verify Ownership of +44 79 21
What is this? 더	1. We can text you with a verification code.
Need help?	
Powered by Duo Security	Text me Text sent
	2. Enter your 6-digit code:
	7 8 Verify
	Back Continue

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.

NUFFIELD DEPARTMENT OF PRIMARY CARE HEALTH SCIENCES Wedge Torgeton Duran	My Settings & Devices	
What is this? Cf Need help?	IOS +44 791 JUST ADDED	
Powered by Duo Security	Default Device: IOS +44 790 21	
	When I log in: Automatically send this device a Duo Push	~
	Save Finish Enrollment	

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.

NUTTER DEPARTMENT OF PRIMARY CARE HEALTH SCIENCES Marka laware What is this? If 2 Need help? Powered by Duo Security	What type of device are you adding? Mobile phone RECOMMENDED Tablet (IPad, Nexus 7, etc.) Security Key (YubliKey, Feltian, etc.) Touch ID Requires Chrome on macOS to use Touch ID. Continue
--	---

Click next to take you to the following screen

What type of tablet are you adding? Output
Android Back Continue

Select your tablet/phone version and click 'Continue'

HEALTH SCIENCES	1. Launch the App Store app and
Need help?	search for "Duo Mobile".
Powered by Duo Security	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'.

PRIMARY CARE HEALTH SCIENCES	Activate Duo Mobile for iOS	
What is this? Ґ	1. Open Duo Mobile.	
Need help?	1. Open Duo Mobile. 2. Tap the "+" button.	
Powered by Duo Security	3. Scan this barcode.	
	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.

NUFFIELD DEPARTMENT OF PRIMARY CARE HEALTH SCIENCES Medial Sciences Basian	Activate Duo Mobile for iOS
What is this?	1. Open Duo Mobile.
Need help?	2. Tap the "+" button.
Powered by Duo Security	3. Scan this barcode.
	Email me an activation link instead.
	Back Continue

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

PRIMARY CARE HEALTH SCIENCES	My Settings &	Devices	
What is this? C	C IOS JUSTA	NDDED.	
Powered by Duo Security	Default Device:	IOS	
	When I log in:	Ask me to choose an authentication method	v
	Saved	inish Enrollment	

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 <u>it-support@phc.ox.ac.uk</u> email address.

If you think your DUO account or device have become compromised or lost/stolen, you must contact the <u>datasecurity@phc.ox.ac.uk</u> 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, MSD IT VPN or the ORCHID VPN service, or you are connected to the wired network at the department.

To connect to ORCHID-E you will use Remote Desktop Protocol (RPC) 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:

RD Web Access x +	<u></u> -		×
← → C orchiddesktops.phc.ox.ac.uk/RDWeb/Pages/en-US/login.aspx?ReturnUrl=/RDWeb/Pages/en-US/Default.aspx	. ☆	Θ	:
The states	X	_	Â
	💀 RD Web /	Access	
Work Resources			
RemoteApp and Desktop Connection			
	Hel	p	<
Domain\user name:			
Password:			7
Security			
Warning: By logging in to this web page, you confirm that this computer complies with your organization's			3
security policy.			7
Sign in			
To protect against unauthorized access, your RD Web Access session will automatically time out after a period of inactivity. If your session ends, refresh your browser			
and sign in again.			
Windows Server* 2019	Microso	ft	
	11111-030		

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:	orchid\cig-taccount1	
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.

ID Web Access × +	- 🗆 ×
C G orchiddesktops.phc.ox.ac.uk/RDWeb/Pages/en-US/Default.aspx	아 ☆ \varTheta :
BI CONSTRUCTION	
	RD Web Access
Work Resources Remote/app and Desistop Connection	
RemoteApp and Desktops	Help Sign out
Current folder: /	
	1
G Desktops	

Click on a desktop icon to download the corresponding connection file to your computer. For Windows 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:

	ote connection could ha r before you connect.	im your local or remote computer. Make sure that you trust the
	Publisher:	phcsrv012.phc.ox.ac.uk
30	Type:	Remote Desktop Connection
	Remote computer:	PHCSRV012.ORCHID.PHC.OX.AC.UK
	Gateway server:	phcsrv012.phc.ox.ac.uk

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

Windows Security	×
Enter your credentials	
Type your username and passwor phcsrv012.orchid.phc.ox.ac.uk cig-jl	d to connect to
Password	
orchid\cig-j	
More choices	

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).

Enter	your credentials	
	ur username and password to connect to 12.orchid.phc.ox.ac.uk	
Passwo	rd	
orchid\c	in tr	
orchiu (c	ig-ji	
	oices	
	oices cig-j	
More ch	oices cig-ji orchid\cig-ji	

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

Windows Security		×
Enter your credentials		
Type your username and passw phcsrv012.orchid.phc.ox.ac.uk	ord to connect to	
cig-taccount1		
•••••	୕	
orchid\cig-taccount1		
More choices		
ОК	Cancel	

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

🗟 Ren	note Desktop Connection	×	S cpub-CIG_Desktop	s-CIG_Desktops-CmsRdsh(2) - PHCSRV	012.ORCHID.PHC.OX.AC.UK - Remote Desktop Connec	tion
1	Connecting to: PHCSRV012.0RCHID.PHC.OX.AC.UK	Cancel				
	Estimating connection quality			Duo Security	le la companya de la	- Alter
					Device: iOS	
					Choose an authentication method	
					Duo Push	Send Me a Push
				Powered by Duo Security	Gil Mo	Call Me
					Passcode	Enter a Passcode
				Pushed a login request to you	r device	Cancel
					E al	

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.

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Accessing Local Drives

When using the **Open Desktop only** 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. This feature is only available on the Windows Desktop, not via services such as R Studio.

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 Windows App.

Q, microsoft remote de Ø	Results for "microsoft remo
🚖 Discover	
A Create	Microsoft Remote Desktop Work from anywhere
Work	
🖉 Play	1000
> Develop	
Categories	
Updates 🐻	

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...'

É	Microsoft Remote Desktop	Edit	Connections	Window	Help
			Add Worksp Add PC	ace	ЖS ЖN
			Import from	RDP file	
			Find		ЖF

Select the RDP file downloaded from the ORCHID desktop website



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

😑 😑 Microsoft Ren	note Desktop
888 🗮 🏶 🗸 + 🗸 🛛 PCs	Workspaces Q Search
Desktop	Desktop
	المحجاة
Desktop	cpub-CIG_DesktopsDesktops-Cmsf 🖉 📋

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.

		Microsoft Remote Desktop
	* • + •	PCs Workspaces Q Search
	Edit PC	
	PC name:	PHCSRV012.ORCHID.PHC.OX.AC.UK:3389
	User account:	Ask when required
Home	General	Display Devices & Audio Folders
	Resolution:	1024 x 768 Use all monitors Start session in full screen ✓ Fit session to window
Surrey	Color quality:	High (32 bit) Optimize for Retina displays Only recommended for connections to Windows 10, Windows Server 2018, and later.
		Update the session resolution on resize Update the session resolution on resize Only available when connecting to Windows 8.1, Windows Server 2012 R2, and later.
		Cancel Save

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:

Connectir	Enter Your User Account	
cpub-CIG	This user account will be used to connect to	:.UK:338
_	PHCSRV012.ORCHID.PHC.OX.AC.UK:3389 (remote PC) and phcsrv012.phc.ox.ac.uk (gateway).	_
Configurir		
	Username: User@Domain or Domain\User	Cancel
	Password:	
	Show 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 only** 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 ORCHID-E 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

Additional compute resources are available to conduct your analysis on the data, in fact most of the hard work should be done on these compute resources rather than the virtual desktops which are more designed as a gateway to the additional services.

R Studio Server

One of the main resources you will use is the R Studio server. This is available from any of the ORCHID-E Desktops and can be accessed via a web browser. Your joining email will include the specific RStudio server for your project.

The recommended web browser is Firefox, Google Chrome is not available on the ORCHID-E desktops.

Once you click on the link you'll be presented with the R Studio server login page.

RStudio Sign In × +			-	σ	×
← → C O A ➡ https://rstudio04.orchid.ph	c.ox.ac.uk/auth-sign-in	ជំ		${\bigcirc}$	≡
🕀 RStudio01 ⊌ Getting Started 💮 Web Transfer					
R Studio	Sign in to RStudio Username: Sign Sign Signed Signal Sign				
	Sign In				

The R Studio service requires a different username and password, you may have been sent this as part of your joining instructions. This uses the format 'cig-RSXX-AAAAAA' and you will have been sent an initial password.

Log into the service using your cig-RS username and password to get to the main R Studio web interface (see below)



Changing R Studio password

This can be completed via the 'Terminal' interface tab in the left hand side of the main window. Click on this tab to bring up the terminal view.



Once in the terminal type:

passwd

To initiate the password change. You will be asked to type in your current password, then to enter a new password (twice).



If the passwords match you will see the success message.

Once you have finished with R Studio you can log off the service by clicking on the 🖻 icon in the top right of the web page (see below). This will log you out of the session and take you back to the login page.



STATA Server

The ORCHID-E STATA server is configured with an MP8 licence for up to 8 concurrent connections.

Access to this server is by the ORCHID-E STATA virtual desktop, the RDP connection file for this can be downloaded from <u>https://orchiddesktops.phc.ox.ac.uk/RDWeb</u> and configured in the same way as the normal RDP files.

The username and password is the same as for all the other ORCHID desktops and once logged in you can open STATA as you would on any normal Windows based system.

■ Set 10 0 Galaxie Statistic Unit Without Hetty There are no formulate definitions Brease no formula hetty There are	semote Desktop Connection	ORCHID.PHC.OKAC.UK - Remote D	ction			- 0 ×
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<pre>Maintein and the Science</pre>	_/ AP-Purdet to			- Nor		
Running cr\35XXXTemp[pref]ik.do Properties 0 0	StataCorp 4095 Lakemay D College Statio 800-571/L-PC 979-505-4600 core network, expiring 2 45 core network, expiri	license: 25-user 8-core ne 1 mumber: S0100310345 ensed to Primary Care Heal University of Oxfi : 1. Unicode is supported; s 2. Nore than 2 billion obs 3. Nacisum number of varial	rp Stetion, Fees 3745 USA LAC http://www.tate.com 4460 vising/pice.com 1/2 LOC 2025 1 1000 aphics. re allowed; see help obs_abl/cs.			
4 bitlet - Inter - Ladit - Tope - Formation - Formation - Internet - Formation - Internet -				Proper	rties	
4 bitlet Internet Laded Toppe Formation Formation Formation Laded Formation Formation <td></td> <td></td> <th></th> <td></td> <td></td> <td></td>						
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Water stand Notes Instance Instance				Туре		
Notes - Cost - Cost				Form	sat	
A Data Faran default I faran default I faran default Rota default Rota default Rota default Rota default State default Value default Value default Value default Value default Value default				Value	a label	
Farance defaulte b Response Label Notar Concordisment Size 0 Manany GAA				Note	5	
b Enzance Lited http://www.internet.com/ http://wwww.internet.com/ http://wwwww.internet.com/ http://wwwwwwwww.internet.com/ http://wwwwwwwwww				# Data		
Label Notas - Unadalen 0 Clocostiens 0 Sian 0 Marony 643				Fram	ie.	default
Nora haidan 0 Obernation 0 Marany 444				p Filen	ame	
Vanden 0 Observations 0 San 0 Manary 64.4				Labe		
Closenutions 0 Sine 0 Memory 64M				Note	5	
Size 0 Memory 64M				Varia	bles	0
hlemory 64M				Obse	ervations	0
				Size		0
				Men	100	64M
x						
Солланд в Солланд В 2011 П.2 01 об терот		and		4		

Once you have finished with your STATA analysis, please LOG OFF the session completely by click on the 'Windows' icon, clicking on your user profile icon and selecting 'Log off'

	đ	Blend for Visual Studio 2019 New	Windows Administrativ
Change a	iccount	: settings	-
Sign out	M		Remote Desktop
8		Microsoft Azure	
D		Microsoft Office 2016 Tools	
		Microsoft SQL Server Tools 18	
۵	N	Notepad++	
¢	s		
#	Q	Ħ 健 🧮	

This will ensure you are no longer consuming any licences for STATA and the resources are available for other users of the service.

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, MSD VPN or ORCHID 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 reconnect 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).



Accessing the SQL Server

The ORCHID-E data is stored on the SQL Server held within the network. You are able to use the Microsoft SQL Server Management Studio (SSMS) application from the virtual desktops to browse and query the various datasets that you have access to.

Open the MS SQL Server Management Studio application from the Windows menu under 'Microsoft SQL Server Tools 18' sub-item.



The name of the ORCHID-E SQL Server is **phcsrv220.orchid.phc.ox.ac.uk** and you should leave the 'Authentication' setting as 'Windows Authentication'. This will use your ORCHID username that you logged onto the desktop with to authenticate with the server.

🖵 🖡 Connect to Server		×
	SQL Server	
Server type:	Database Engine	~
Server name:	phcsrv031.orchid.phc.ox.ac.uk	~
Authentication:	Windows Authentication	~
User name:	ORCHID\cig;	\sim
Password:		
	Remember password	
	Connect Cancel Help Optio	ns >>

If you're not able to access the SQL server it is likely that you have not been setup with the required database access. You will need to contact your project lead and request access to the required dataset once it is ready.

Accessing the SQL Server from STATA

The ORCHID-E STATA server has an ODBC connection ready to go for pulling data from the SQL Server. You can connect to this by issuing the following STATA commands

odbc query "PHCSRV220"

Loading data can be done by executing an SQL Select statement, for example (this will not execute unless you have access to this database and table):

odbc load, exec("SELECT TOP (10) * FROM [DBName].[dbo].[TableName]") dsn("PHCSRV220")

We recommend using SSMS to craft your SELECT statement first before importing into STATA. This will allow you to narrow down your data selection and reduce the amount of memory required to process your analysis.

Accessing the SQL Server from RStudio

The ORCHID-E RStudio server has an ODBC configuration using the FreeTDS driver that allows you to pull data from the SQL Server.

Using the library DBI you can import data into R using the following commands:

```
library(DBI)
con <- dbConnect(odbc::odbc(), 'PHCSRV220', timeout=10, Database='DBNAME',
uid=rstudioapi::showPrompt(title="Username", message="Username",default=""),
pwd=rstudioapi::askForPassword())</pre>
```

This will create a connection via ODBC using the DSN PHCSRV220 to a database called DBNAME and will prompt you for a username and password. When entering the username remember to add orchid\ in front of your CIG username. You can replace the R code after the uid entry with your username, but using the R API calls allows for code re-use without having to worry about stripping out usernames & passwords.

Once connected you can query a table using the following:

```
mydata <- DBI::dbGetQuery(con, "SELECT TOP (10) * FROM [DBNAME].[dbo].[TableName]")
head(mydata)</pre>
```

This will select the top 10 rows from the table Practice and display the values.

Don't forget to disconnect from the database when you are finished using

dbDisconnect(con)

For more information see <u>https://cran.r-project.org/web/packages/odbc/odbc.pdf</u> plus other reference material online.

We recommend using SSMS to craft your SELECT statement first before importing into R. This will allow you to narrow down your data selection and reduce the amount of memory required to process your analysis.

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	
ORCHID-E Desktops	20GB	
ORCHID-E STATA Dekstops	20GB	

There are also shared folders and individual project folders available which should be used as the main storage area for scripts, documents, code and other project related material. These shared areas are set out below, note these drive letters only apply to Windows based services

Share drive	Usage	Permissions
W:	Project level shared folders for storage	Each project folder has separate
	of project related data, code and	permissions
	documentation	

R Studio server – Connecting to shared drives

The R Studio server is a Linux based service and does not support the use of drive letters in the same way as Windows. You can access the W: drive by following these steps:

When you open RStudio click on the 'Terminal' tab in the bottom left window

Type in the following command replacing the cig-XXXXXX with your main username (the one you use to log onto the virtual desktops)

cifscreds add -u cig-XXXXXX -d orchid.phc.ox.ac.uk

For example, if your username is cig-x12345 you would type:

cifscreds add -u cig-x12345 -d orchid.phc.ox.ac.uk

When you press return you will be prompted to enter your password. Note it is important that you enter your main password, **not the RStudio password**. You won't be prompted if this is wrong so please take care.

When you run the cifscreds command, your username & password will have been cached so you don't need to run this command every time you use RStudio, if you find you can't access the drive when you try run the command.

Now you will be able to access the W drive using the following path

~/wdrive

So for example, enter the following into the terminal window:

ls ~/wdrive

You will see a directory listing of the R drive. If not, you may have entered your password wrong so run the following command

cifscreds clear -u cig-xXXXXX -d orchid.phc.ox.ac.uk

Replacing the cig-xXXXXX with your own username. Once this command is complete re-run the cifscreds add command at the top of this document and enter your password again.

If the above clear command fails to resolve the issue try using

cifscreds clearall

Which will remove any cached passwords. After this you should be able to run the cifscreds add command as above.

STATA Server

The STATA server is a Windows based service and is configured to provide the same local drive mappings as the ORCHID-E Desktops, so you will find the W: drive available on the STATA server.

These can be used to move data and scripts from the shared and projects areas to the STATA server for running on the STATA server.

NOTE: This service will be coming soon to ORCHID-E

As previously stated in the introduction there is no method of connecting any desktop within the ORCHID-E network to external storage resources, so to transfer data in and out of ORCHID-E you will need to use the Web Transfer service.

The site can be accessed by <u>https://webt.orchid.phc.ox.ac.uk</u> on either the Open or ORCHID-E desktops, or by clicking on the link in Firefox (see below)



You will be prompted to log in with your ORCHID username after which the following page will be shown.



The approval process is explained in the diagram. If you have multiple files to transfer it is advised to zip these up (either via Windows built-in zip or 7Zip) and submit a single ZIP file rather than multiple submissions.

You can view the status of submitted transfers further down the page (see below)

Upload

Browse... No file selected.

Download Files							
This section contains file	es you have uploaded that have be	en approved b	y a moderator and can be downloaded.				
There is no email addr	ess logged against your account	, you will not	be able to receive alerts from this service	e.			
Upload Date	Filename (click to download)	Status	Notes	Size			
12/11/2020 16:25:00	<u>Mutana jpg</u>	Approved		13963 Bytes			
12/11/2020 11:12:00	flowchart.png	Approved		8349 Bytes			
12/11/2020 20:36:00	Mu .jpg	Rejected	Rejection Reason: No	13963 Bytes			
12/11/2020 16:26:00	db.udl	Rejected	Rejection Reason: Test	440 Bytes			
12/11/2020 16:19:00	db.udl	Rejected	Rejection Reason: Test	440 Bytes			

From this table you can see the process of the submission, any notes, and the status and, if approved, you can click on the links to download the file. If you see the message regarding 'no email address logged' (see above) you may

not have provided your email address on your registration documents. Please let your Theme Lead know your email so you can be notified when data transfers have been approved.

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.