



User Guide

7. January 2021

Table of Contents

Introduction	3
Requirements and Terms of Use	3
How to Access UCPH SIF	3
Sign-up	3
Login	
Overview	5
Project Management	6
Files	
File Sharing	14
Setup	14
Efficient Data Access	
WebDAVS	16
Windows File Manager	17
Adjust Windows WebDAVS Transfer Limit	
Mac OSX File Manager	25
Linux File Manager	27
SFTP	28
FileZilla	29
WinSCP	31
PuTTY SFTP	31
Linux File Manager	32
SSHFS	
Support, Questions and Comments	33

Introduction

University of Copenhagen – Sensitive Information Facility (UCPH SIF or just SIF) is the storage facility provided by University of Copenhagen to employees and students. It delivers centralized storage space for personal and shared files with automatic geo-replicated backup.

The latest version of this guide is always available from https://sif.ku.dk/ in different languages.

Requirements and Terms of Use

You only need a web browser to use the fundamental features of the SIF system. In case you want to use the advanced features, you may have to install additional client software.

SIF comes with few restrictions and rules, and you can always find them on

https://sif.ku.dk/terms.html

In short the terms should follow common sense, e.g. it is your responsibility to only store data that you actually have the right to store, and to keep your login safe and secret to prevent others from access to your account.

IMPORTANT: Please note that transfer and storage of so-called *personal data* typically are under strict regulation set out in The Act on Processing of Personal Data as described on <u>Personal data in research projects</u> on KUnet and the <u>information from the Danish Data Protection Agency</u>. Thus you are **not** generally permitted to just store them on your PC or on remote storage solutions like ERDA or other general purpose UCPH storage facilities. Please only ever store any such data on SIF or other officially UCPH-approved sensitive data storage systems.

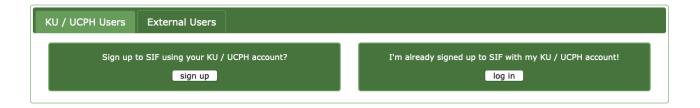
How to Access UCPH SIF

Everyone associated with UCPH has a username consisting of six characters, like *abc123*. The username is popularly known as the Swedish number-plate, and it's generally used to access intranet facilities like KU Webmail and Kunet.

UCPH users can use that same login to sign up for and access their account on SIF. External collaboration partners need to request an account.

Sign-up

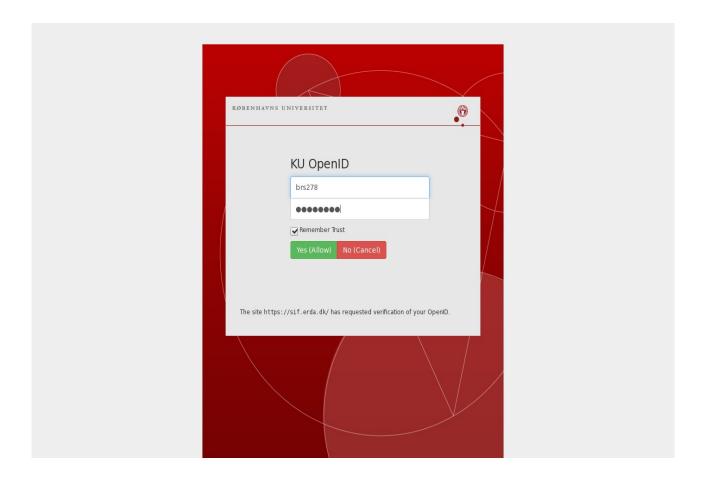
Signing up either as a UCPH user or an external collaboration partner is as easy as clicking **sign up** on https://sif.ku.dk using either the UCPH or External user tab in line with the Sign up Intro.



Login

After signing up both UCPH users and external collaboration partners can access their account by pointing a web browser to https://sif.ku.dk/ and clicking the 'log in' button on the UCPH or External Users tab respectively.

For UCPH users the login procedure will look like shown for the user with KU ID brs278:



After entering your login and clicking **Yes (Allow)** you will proceed to the two-factor login page where you must enter the current 6-digit token from your authenticator app already installed and configured as described in the <u>Sign up Intro</u>.

In this case the app showed the token 876301 which was therefore entered







Support

SIF User Guide
Questions about SIF?
Privacy Policy & Cookie Policy
Please contact us at support@sif.erda.dk

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and accepted to reach the actual SIF site.

The web browser remembers your login for a while, so you don't have to repeat the login every single time. However, you can explicitly log out from inside SIF after use. This is generally recommended, and particularly if you share your computer with anyone else. SIF login sessions are also automatically limited to at most 24 hours to limit the risk of unauthorized access to any sessions inadvertently left open.

Overview

The entry point to SIF is the project management page where you can administrate and access your projects. It should be noted that data sets on SIF are isolated on a per-project basis, so you need to carefully consider how to structure your data in case you have multiple sensitive data sets.

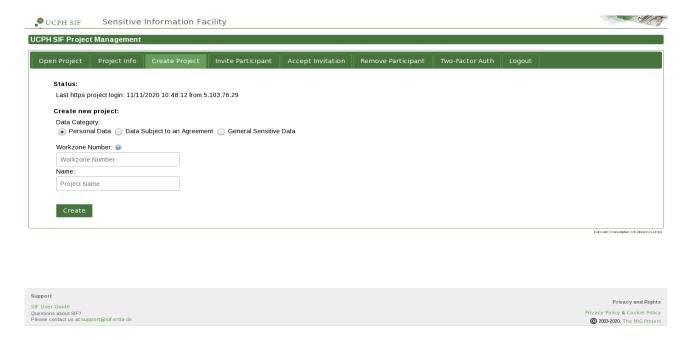
When you open a particular SIF project you will start out on the file manager where you can manage your files in a familiar fashion. Use the navigation menu to the left to access to your **Files** and **Setup** pages. Each of the pages is described more thoroughly in the following sections.

Project Management

When you start out on SIF you don't have any projects set up yet, so you need to either create one or accept any invitations you may have received to existing ones. If you are the owner or recipient of personal data you always have to obtain approval from the Faculty Secretariat before storing it on SIF. Please contact your faculty's <u>legal department</u> for advice.

The legal approval from your faculty secretariat includes the Workzone number, that you need to enter during SIF project creation.

To create a new SIF project open up the Create project tab:



Select the project data category:

Personal Data:

Must be selected if your project contains personal data and thus requires prior approval from the legal department. Please refer to KUnet about processing of personal data

Data Subject to an Agreement:

Must be selected if the data handling in your project requires prior approval by the legal department and needs to be transferred from you as a UCPH researcher to your external collaboration partner or vice versa. Please refer to KUnet about sharing and disclosure of research data

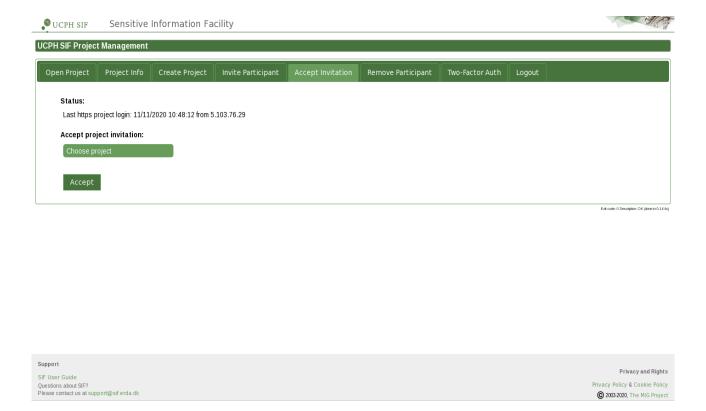
General Sensitive Data:

Must be selected if your project does not require prior approval by the legal department.

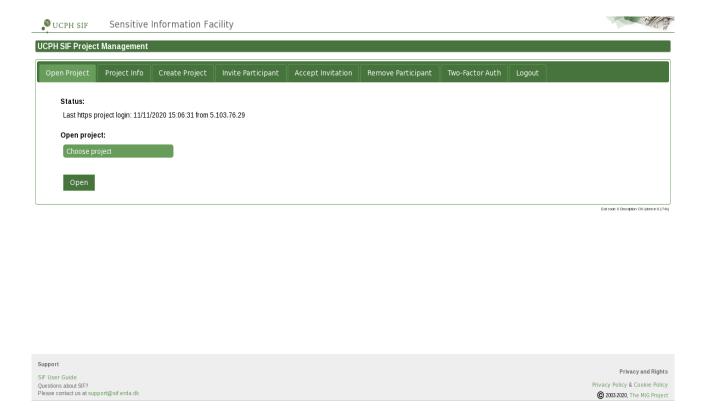
When you select 'Personal Data' or 'Data Subject to an Agreement', you need to supply the Workzonenumber of the project.

Click Create to proceed and note that the legal office will automatically be notified in order to verify workzone number and compliance with any data restrictions and permissions.

If you are not the formal data owner but just collaborate with someone on SIF, you will likely instead have received an invitation to join an existing SIF project. In that case you get access by opening the *Accept invitation* tab, choosing the invitation in the drop-down menu and clicking Accept.



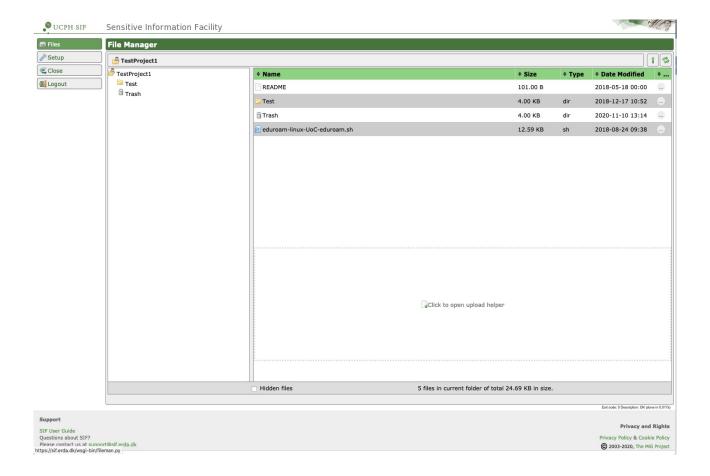
Once you have a project to work with you can open it from the *Open Project* tab by selecting it in the drop-down menu and clicking Login. This will lead you on to the Files interface for the chosen project.



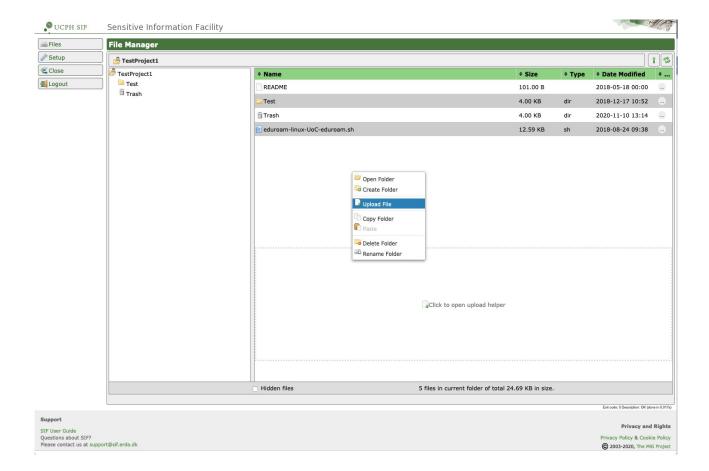
Files

This is your main area on SIF where you manage your project files. The directory tree in the left pane takes you quickly to a specific sub-directory and the right pane shows the files and directories in the current directory.

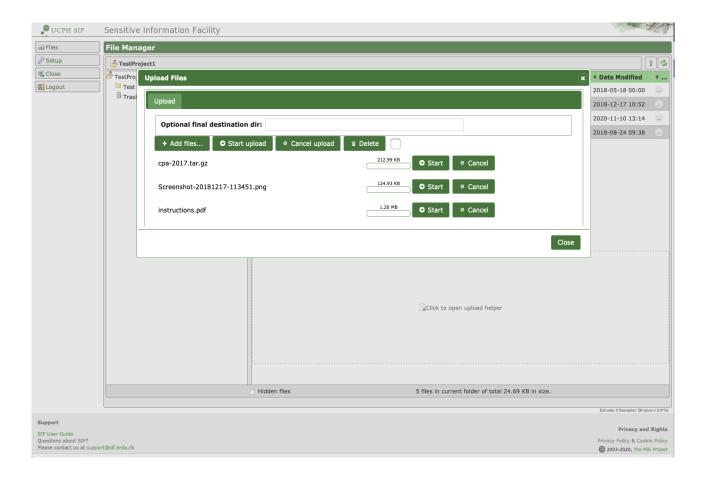
The location bar right above the two panes shows the path to the current directory with quick navigation links to parent directories.



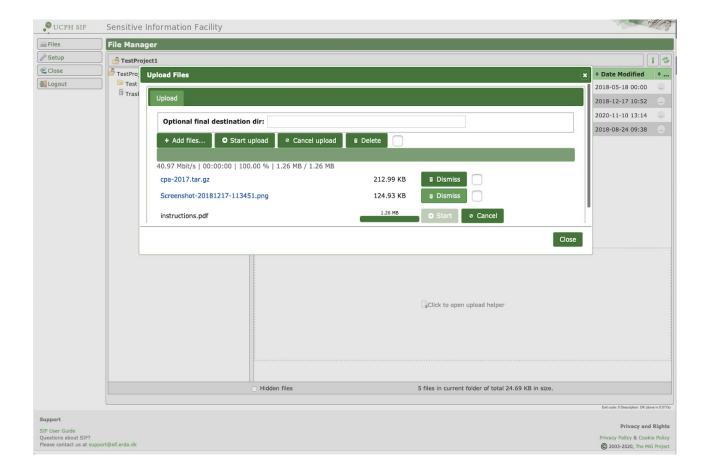
Right-clicking a directory or file brings up a context menu in which you can select common actions on the item that you right-clicked. For files the actions include e.g. download and rename. For directories you get the choice of e.g. uploading files. Right-clicking in the empty space below the entries in the right pane brings up the context menu for the current directory.



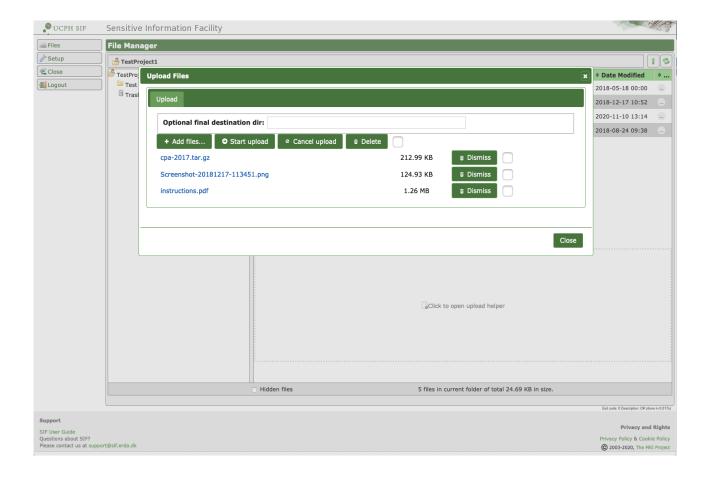
Choosing **Upload File** from the right-click menu or clicking the upload helper link at the bottom opens the upload dialog where you can drag and drop local files from your desktop or click Add files... and point files out for upload.



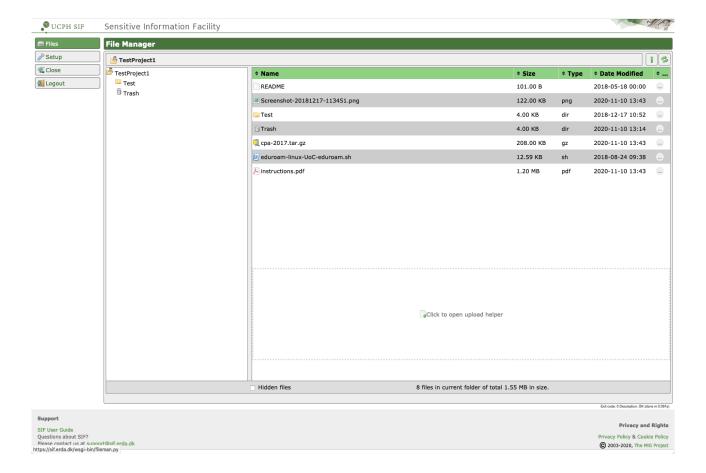
When you are done selecting files for upload you can click **Start upload** to actually upload.



wait for them to complete or click **Cancel** if you change your mind.



Finally click ${f Close}$ when finished and your uploaded files show up among your other files.



Double click files to download and open in a suitable local application. Please note that any changes made in the local application will *only* be saved locally and not in SIF. Therefore it is necessary to upload the modified file again in that case.

Please refer to the Efficient Data Access sections for a guide to the possibilities of mounting and easily working directly on files in your SIF projects without worrying about the explicit download and upload steps.

File Sharing

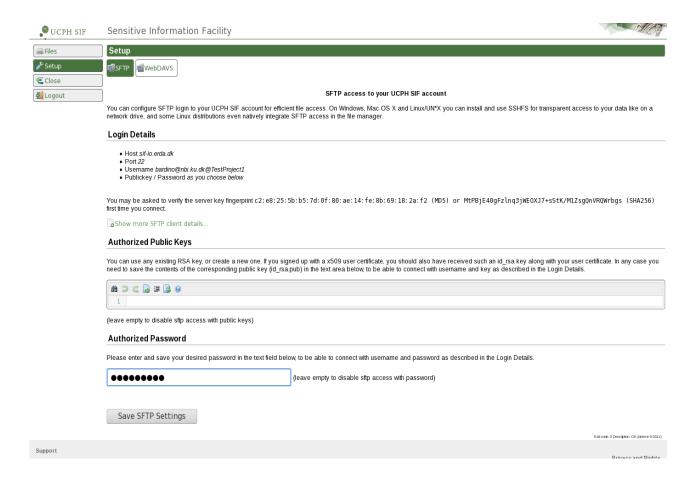
Research collaboration often requires some kind of data sharing. SIF integrates automatic and transparent per-project data sharing, so that any other project participants automatically share the same folders. You obviously need to consider this when creating your SIF projects and when inviting other users to join them, so that you only give access to the required and allowed data.

Setup

On the **Setup** page(s) you can set up advanced access methods like upload/download with a SFTP/WebDAVS client or mapping of your SIF project folder as a network drive on your local PC or workstation.

Further description of the **SFTP/WebDAVS** tabs and their use is available in the Efficient Data Access sections.

You don't need to edit the setup to just use the fundamental functionalities. So you can safely leave them alone initially and try out the simple web access.



Efficient Data Access

In addition to the web interface SIF also provides some advanced access interfaces for efficient and transparently integrated data access. These interfaces e.g. allow you to transfer many or big files more efficiently and to map your individual SIF project files and folders on your local PC or workstation. In that way you can work with them as if they were local files.

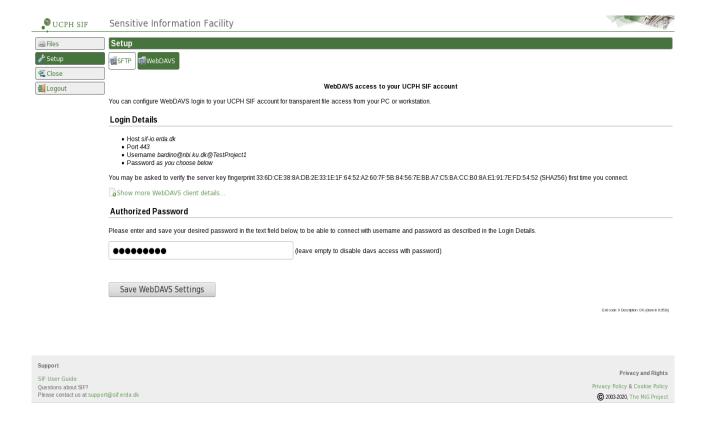
Please note that the strict SIF project isolation applies to these interfaces as well, so you can **only** have one project open at a time. If you have more than one SIF project you configure efficient access for each of them individually.

All the interfaces use a secure connection to SIF, so they are accessible from anywhere where you have an Internet connection. Thus, you do *not* need VPN or anything like that to access them from outside UCPH. However, they require you to have an active two-factor authentication session from the same computer for added security.

WebDAVS

WebDAV is a popular protocol to access remote storage using extensions to the HTTP protocol, and it can be secured with TLS/SSL in the same way. In the following sections we refer to this secured version as WebDAVS. Recent versions of Microsoft Windows, Mac OSX and Linux support this protocol natively, so with those it's possible to access such remote content like if it was in a local folder. That is, without the need to install additional software and still in a secure fashion.

You generally need to first open the **WebDAVS** setup tab on your **Setup** page at SIF and configure how you want to authenticate to our WebDAVS server. Enter a strong password that you want to login with and click **Save WebDAVS Settings**. Please also note your Login Details including your automatic login username shown there.



You can also find the required server URL by clicking the **Show more WebDAVS client details...** link there. In this example the server URL is https://sif-io.erda.dk and the automatic username is bardino@nbi.ku.dk@TestProject1, but please look up your own.

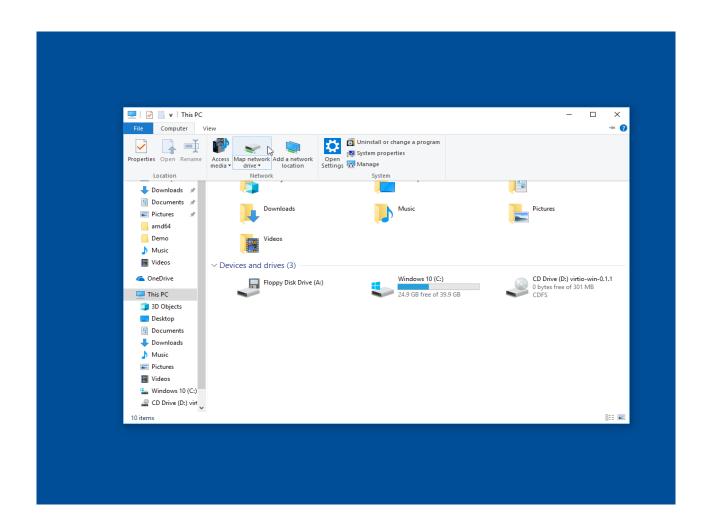
Windows File Manager

In Windows it is possible to access WebDAVS services directly from the built-in file manager. E.g. with the **Map network drive** or the **Add a network location** button available when navigating to the **Computer** location as shown in the images below. Please note that Windows 7 only provides the latter functionality inside the **Map network drive** wizard while Windows 8 and later exposes it as a dedicated button.

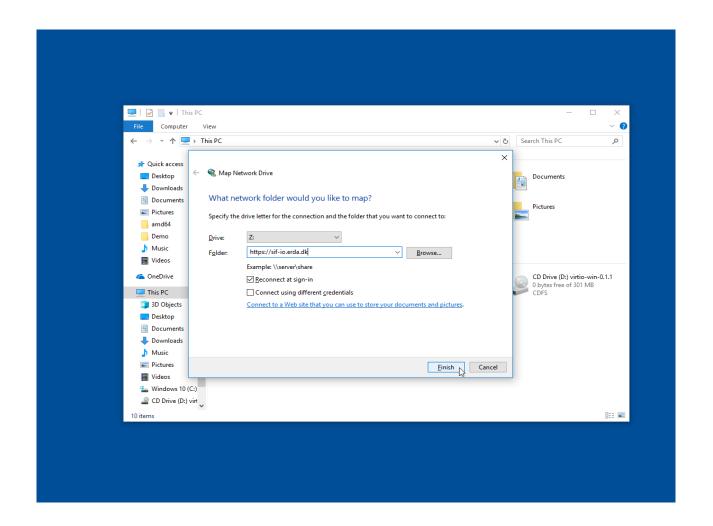
Below the procedure with the native Windows 10 File handler with **Map network drive** is shown.

NOTE: Windows 7 was the first Windows version to provide reasonable native WebDAVS support. Older versions like Windows Vista **may** also work with these instructions, and otherwise external WebDAVS helpers can provide similar functionality.

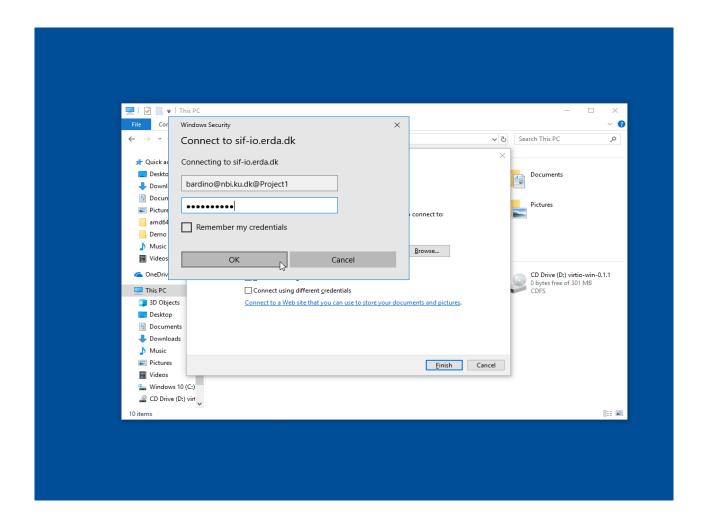
First click **Map network drive** to launch the wizard



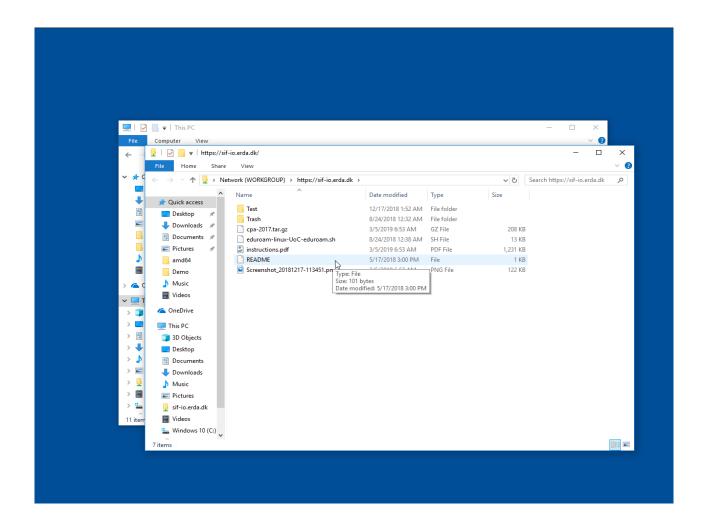
Select which drive letter you want to use (Z: in the example) and enter the SIF server URL from the **WebDAVS** setup tab and click **Finish** to actually connect. In this case the server URL https://sif-io.erda.dk is used



You will then be prompted for your automatic username and the password you entered on the **WebDAVS** setup tab. In this case it specified the automatic username bardino@nbi.ku.dk@TestProject1 to match my user name and my TestProject1 SIF project.



Click OK to login and complete the wizard. Then your SIF files and folders should appear up in the standard file manager mapped as the chosen drive letter.



As long as you are online you can use the files there just like your local ones.

When you're done working on the data you can right click the mapped drive (the highlighted DavWWWROOT ... entry on the left) and select Disconnect to close the mapping.

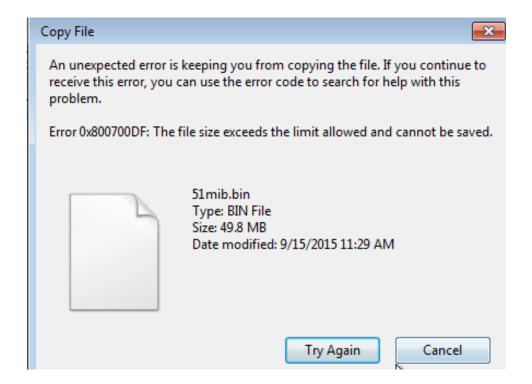
Next time you start your computer you can easily access the project data again using the saved mapped drive from that same **Computer** location. Importantly you need to always first log in and provide your two-factor token on the SIF web page before you can access the mapped drive, however.

It is also possible to make the remote content available as a so-called network location by filling in the server URL from above directly in the *Folder* field of the **Add network location** wizard.

Adjust Windows WebDAVS Transfer Limit

NOTE: Unfortunately Microsoft has chosen to enforce a very low and artificial limit on how big files one can download from WebDAV(S) services.

In practice the limit results in a rather unhelpful error message like the one shown below, if you attempt to download files of about 50MB or more from your WebDAVS folder.

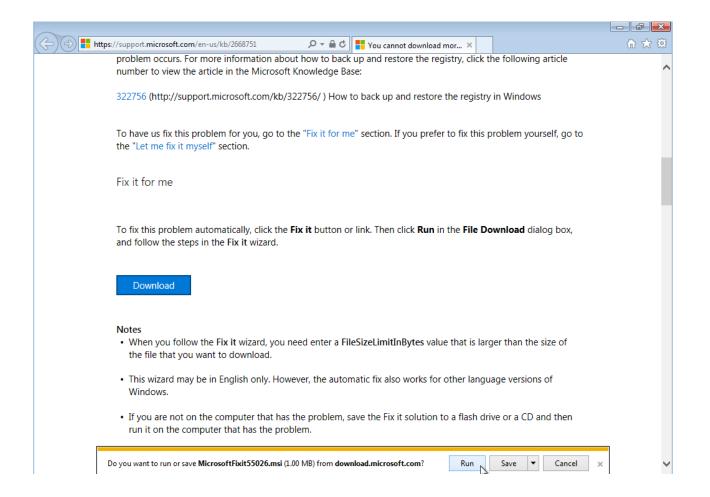


It is treated in more detail on their support pages where they also provide a small tool to edit the limit. The following paragraphs summarize the steps to increase this excessively small limit on download file sizes for Windows 7. At least the 'Fix it yourself' solution should also work for later versions of Windows.

Open the associated support page at Microsoft

https://support.microsoft.com/en-us/kb/2668751

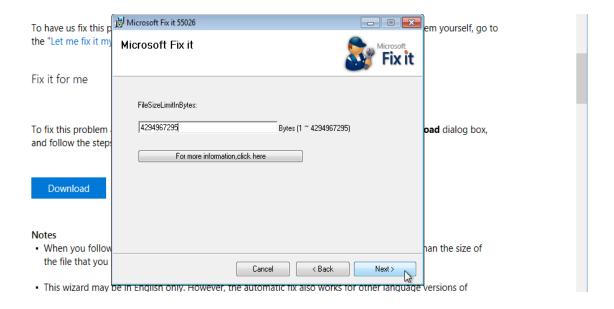
and scroll down to the blue and white **Download** button. Click it and select **Run** as shown below



to proceed with installing the *Fix it* application from Microsoft. First step is to tick the **I Agree** box and click **Next**



After one or more dialogs where you just answer **Yes** or **Next** you reach the following dialog where you can actually change the size limit from the default *50000000* Bytes (i.e. about 50MB) to e.g. the maximum possible value shown to the right, *4294967295* Bytes (i.e. 4GB).

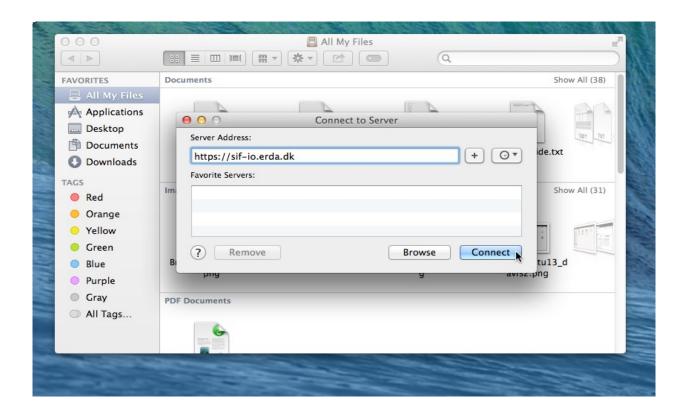


Then click **Next** and wait for Fix it to create a restore point and so on before finally selecting **Close** to finish the wizard and **Yes** to reboot when requested. Then it becomes possible to transfer much bigger files up to slightly more than 4GB.

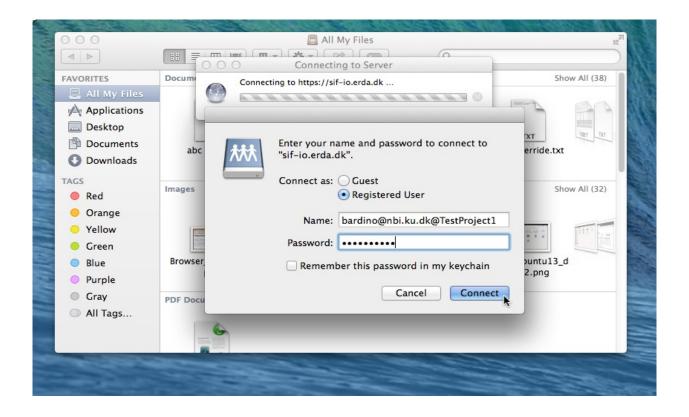
Mac OSX File Manager

On Mac OSX you can access remote WebDAV(S) content with the built-in file manager, Finder. In the menu under **Go** you select **Connect to Server**.

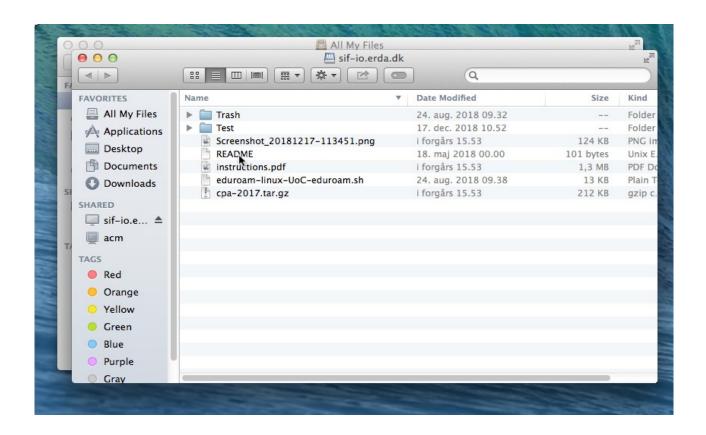
Enter the server URL from the **WebDAVS** setup tab and click **Connect**.



You will then be prompted for your automatic username and the password you entered there. In this case it specified the automatic username bardino@nbi.ku.dk@TestProject1



On success you will see the remote contents which could look like this

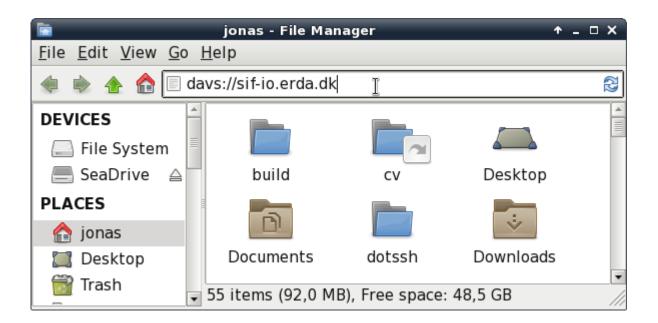


Linux File Manager

On most modern Linux distributions you can access remote WebDAV(S) content with the native file manager - be it Nautilus, Konqueror, Dolphin, Thunar or something else. In the file manager menu typically under **Go** you select **Open Location**.

Enter the server URL from the **WebDAVS** setup tab (possibly replacing *https* with *davs* in the URL if it complains) and click **Connect**.

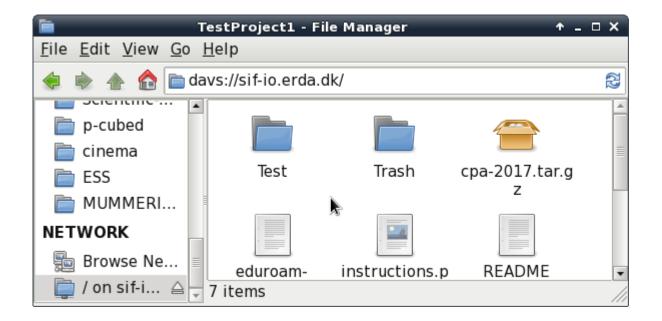
In XFCE with the Thunar file manager as shown here you need to use the *davs* rather than the *https* prefix in the URL.



You will then be prompted for your automatic username and the password you entered on the **WebDAVS** setup tab. In this case it specified the automatic username bardino@nbi.ku.dk@TestProject1 but your username will generally be a combination of your registered email and your SIF project name.



On success you will see the remote contents which could look like this



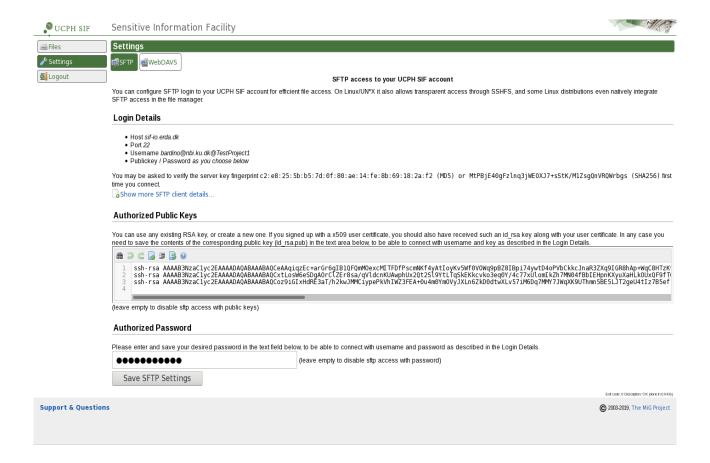
NOTE: The Nautilus/Thunar file managers rely on the GNOME gvfs library, which had a known bug at least until recent versions. Thus upload of files bigger than 1GB would simply hang. You can try to upgrade to a working version of gvfs (e.g. 1.22.2) or use another client if you experience this problem.

SFTP

SFTP is a secure end efficient file transfer protocol similar to the old FTP protocol, but with proper security built in. It relies on the security mechanisms of the <u>OpenSSH</u> suite of applications and it is supported by a number of clients on all popular platforms. Some platforms even integrate it natively in the general file manager, so that no extra software is required.

You generally need to first open the **SFTP** setup tab on your **Setup** page at SIF and configure how you want to authenticate to our SFTP server. Either by inserting one or more SSH public keys¹ or entering a password that you want to login with and click **Save SFTP Settings**. Please also note the Login Details including the automatic username shown there.

¹ How they are used is outside the scope of this guide but a good starting point could be https://support.cs.ncl.ac.uk/Advice/Secure Shell/PublicKey/



We recommend one of the following clients known to work with SIF but it is possibly to use others.

FileZilla

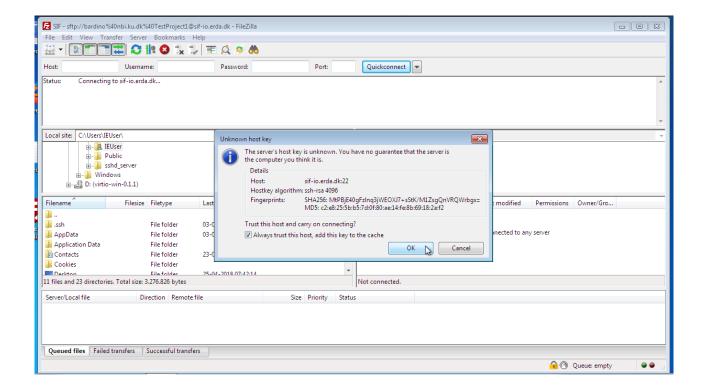
FileZilla is a stand-alone FTP/FTPS/SFTP client available on all popular platforms. It includes a *synchronized browsing* feature, convenient for manually synchronizing folders between your computer(s) and SIF. Additionally FileZilla comes in a *portable* version, which runs from anywhere without the need to install it first - and thus no need for administrator privileges:

http://portableapps.com/apps/internet/filezilla_portable

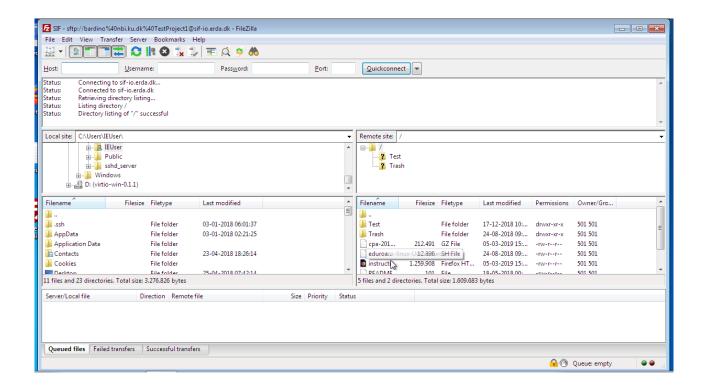
Open the **Site Manager** e.g. from the **File** menu in FileZilla and add a New Site with the SIF details filled in as shown below, but just using the automatic username and the password you entered on your S**FTP** Setup tab:



First time you connect you are asked to verify the SIF server *fingerprint*, which you can find on your SIF SFTP Setup page. If you don't want to repeat this every time, you can tick the *Always trust certificate in future sessions* box before you choose OK to connect.



Then your SIF files should appear on the right side pane like this



Please refer to the project page for further information:

https://filezilla-project.org

WinSCP

WinSCP is another popular stand-alone FTP/FTPS/SFTP client available only for Windows. The SIF configuration is not that different from the FileZilla one, and likewise it comes in a *portable* version which doesn't require installation and administrator rights. Additionally it has a semi-automatic *sync* feature which eases synchronization of files and folders between your computer(s) and SIF.

Please refer to the project page for more information:

https://winscp.net/

Putty SFTP

PuTTY is a popular stand-alone SSH client originally developed for Windows, but now also available on other platforms. It is used under the hood for a number of other clients and comes with a SFTP command line client that can be used to interact with SIF.

IMPORTANT: due to security concerns you need a recent version to connect to our SFTP service. Version 0.67 and later are known to work, whereas older versions *at least* up to 0.64 fail to connect with the error "Couldn't agree a key exchange algorithm: available ...". If you look at the PuTTY Changes page you'll see that there are a number of recent security fixes, which motivate upgrading to version 0.68 or later anyway.

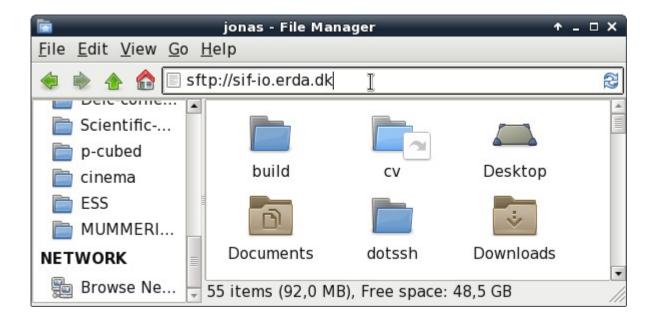
Please refer to the project page for more information:

www.chiark.greenend.org.uk/~sgtatham/putty/

Linux File Manager

On most modern Linux distributions you can access remote SFTP content with the native file manager. The steps are the same as described in the corresponding section about Linux File Manager for WebDAVS, just with the URL changed to point at the SFTP service.

Enter the server details from the **SFTP** setup tab (possibly replacing sftp with ssh if it complains) and click **Connect**. In this example it would be just sftp://sif-io.erda.dk as port 22 is implicit.



Then proceed as for the WebDAVS case, but again with the login details from your SFTP Setup.

SSHFS

On Mac OSX and Linux it's possible to map remote storage with SSHFS so that the contents look just like if they were in a local directory. Your **SFTP** setup tab contains very brief instructions for doing so if you click the **Show more SFTP client details...** link.

Support, Questions and Comments

We welcome all comments on how we can improve the user experience as well as any questions you may have about the use of SIF. This includes support in case something doesn't work the way it is intended and described here.

It is very helpful for us if you include information about your operating system and browser with any support requests. If you aren't sure you can open up

https://www.whatismybrowser.com/ or http://detectmybrowser.com/

and send us at least the line below "Your web browser is:" in the blue block at the top or the line starting with "You're using" respectively.

Screenshots of any problems are also very useful.

Feel free to contact us by sending an email to the SIF Support < support@sif.erda.dk >.

Kind Regards, the UCPH SIF team.