Guideline for use of data exchange in the SoilCare project using ownCloud

Erik van den Elsen

Wageningen Environmental Research

Version 1.0 - 09 March 2017

Contents

SOILCARE ownCloud user manual

1. Introduction

Data exchange is essential in a research project such as SoilCare. Use of similar systems, such as DropBox, are widely spread, but have certain disadvantages; on the free version of DropBox, storage space is limited and users have access and Read/Write control over all folders. This is dangerous since one user can (wanted or unwanted) delete all information in the whole folder tree or virusses can spread through all folders. No control over access for various folders is possible (only in the expensive, paid version).

Therefore we have chosen to use ownCloud as data-exchange platform in the SoilCare project. ownCloud has the following advantages;

- Folder structure similar to DropBox,
- The data is accessible both online and by synchronised folders on your computer. The last method is optional and requires installation of a desktop application (client software),
- Similar Online interface as DropBox,
- Similar client software available for Windows, Mac OS-X, Mac iOS, Android,
- Drag-and-drop interface,
- Internal image, video and PDF file viewer,
- Unlimited storage capacity (not 'eating away' on the free 2Gb DropBox quota),
- Ability to set folder access to users: 'folder permissions' – make folders accessible for Read-Write (R/W) or Read (R) only.

This guideline will only explain how ownCloud is implemented for the SOILCARE project. The ownCloud user manual will explain how to use ownCloud in general.

SOILCARE ownCloud user manual

2. First Access to SoilCare ownCloud and Setup

ownCloud is free software that is developed as open source. The ownCloud data exchange service for SOILCARE is hosted with a company that is called ownCube (www.owncube.com); ownCube hosts the free ownCloud software, and stores our data.

2.1.   Accessing the website and first login

The internet address (URL) for our ownCloud server is: https://soilcare.owncube.com .

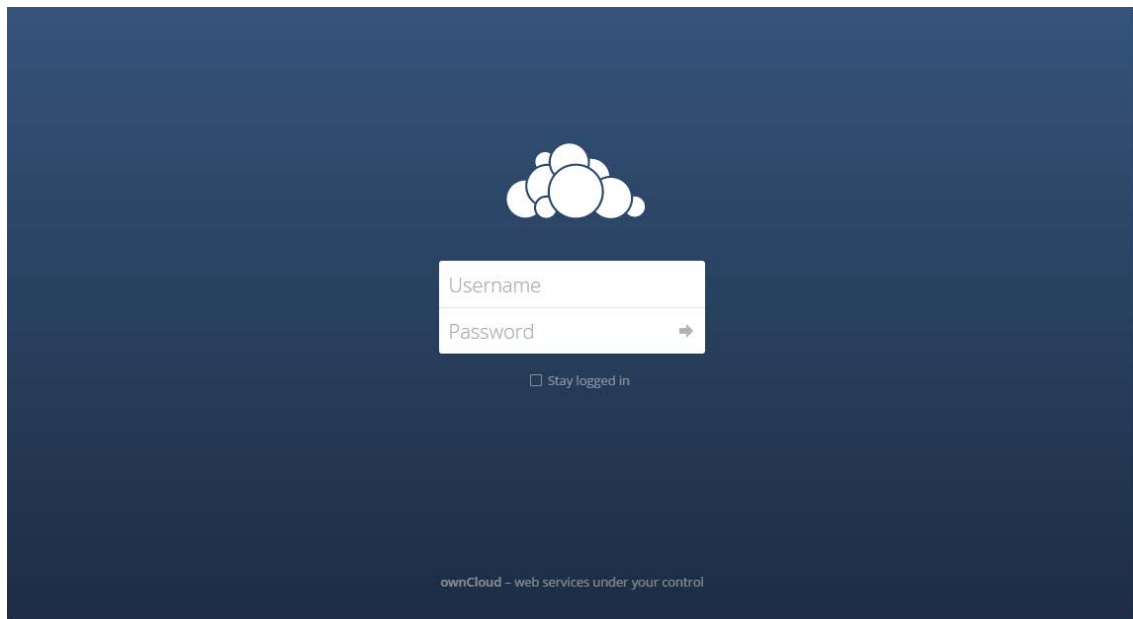When you go to this website, you will see the ownCloud login screen:

Figure 1 ownCloud login screen.

An account has already been made for all SOILCARE team members, use the following login:

Username: your first name in lowercase characters
Password: your first name in lowercase characters+99

If your full name is '*John Lennon*', your username and password will be:

Example username: *john*, example password: *john99*

NOTE: Since we have a number of people in the project with a **similar first name**, there are some exceptions that can be found in the table below:

Table 1 - SoilCare ownCloud login exceptions

Name	Login name	password
Antonio Berti	antonio_b	antonio_b99
Antonio Ferreira	antonio_f	antonio_f99
Chris Blokbuis	chris_b	chris_b99
Chris Kjeldsen	chris_k	chris_k99
Chris Stoate	chris_s	chris_s99
Tamas Hermann	tamas_h	tamas_h99
Tamas Kismanyoky	tamas_k	tamas_k99

After first login, you can change your password. How to do that is explained in paragraph 2.4.

After logging in, you will see the folder structure of the SoilCare ownCloud file browser (Figure 2).

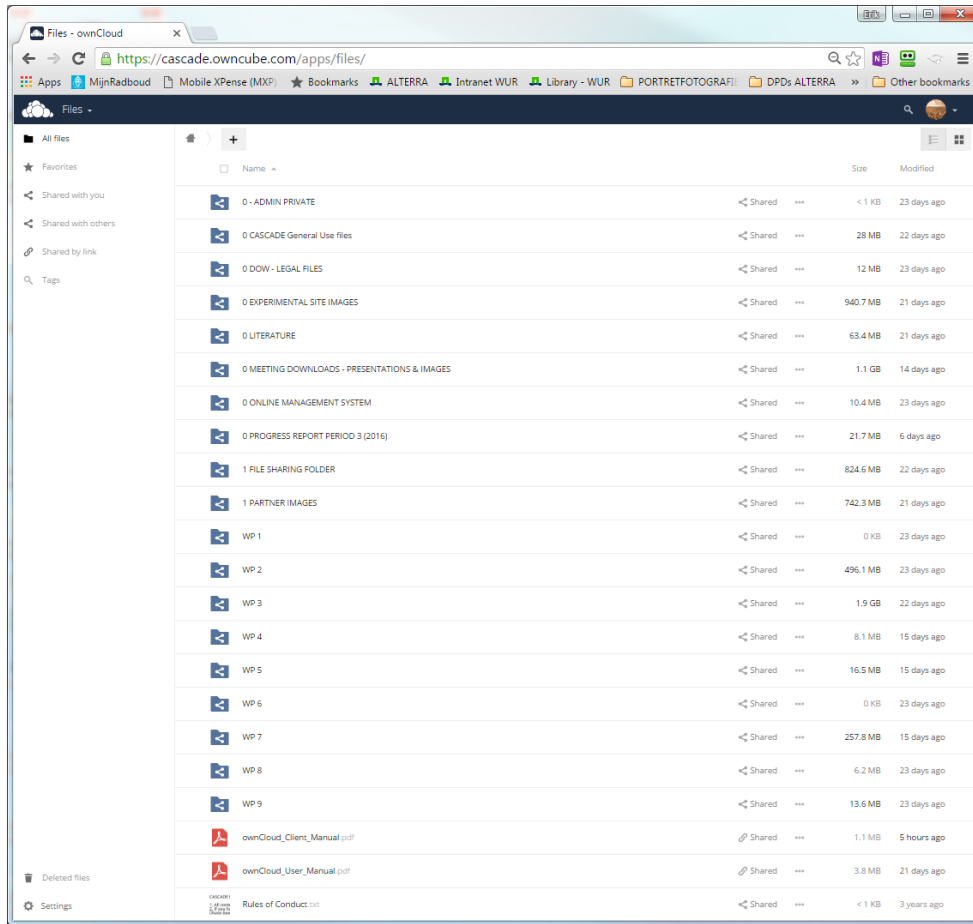How to use the online file browser is described in the ownCloud user manual, from page 9 onward.

Figure 2 Folder view of SOILCARE ownCloud file browser after first login.

2.2. Installation of the Desktop App (client software)

The Desktop Application (also called 'client software') is the piece of software that will make the online SoilCare ownCloud folders continuously synchronize with the hard disk on your computer. This enables you to simply access the SoilCare files from folders on your own computer using Windows Explorer (or Mac Finder). It also enables offline access to the files.
When you have the client software installed, and someone adds a file to a certain folder in the online browser, this file will be automatically be added (=synchronized) to the same folder on your computer.

It is convenient to install this software but not absolutely necessary, since you can also access the SOILCARE files using the web interface as described in this manual. You can download the client software user manual here.

The Desktop Apps (client software) can be downloaded from the following link:
https://ownCloud.com/download/#desktop-clients
(If the link does not work by clicking, please copy it into the address box of your browser).

After downloading the desktop client installer (.exe file for Windows), execute this installer by double-clicking it (you can also directly run it by clicking the 'Run' button). The installer will start.
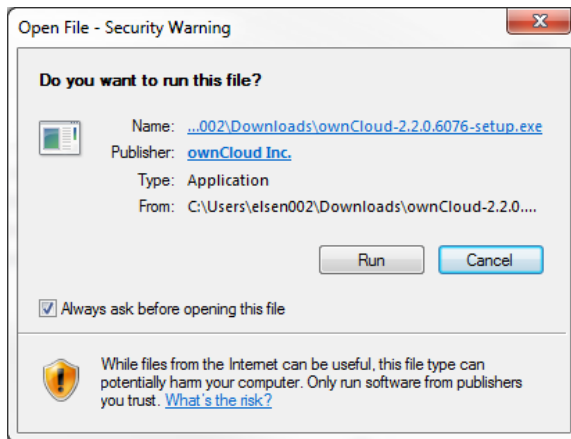

1. Possibly (depending on your admin rights) you get a question now whether you allow software to be installed on your computer. Click 'Yes' or 'Allow' to allow software installation.
   In the ownCloud setup wizard, Click the 'Next >' button to proceed.

2. Now you will receive a question about the components to install. From the drop-down menu select 'Standard' install (already selected). Click 'Next >'.
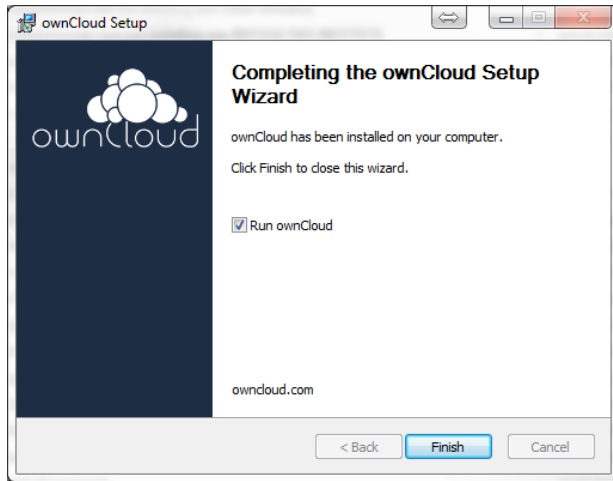

6
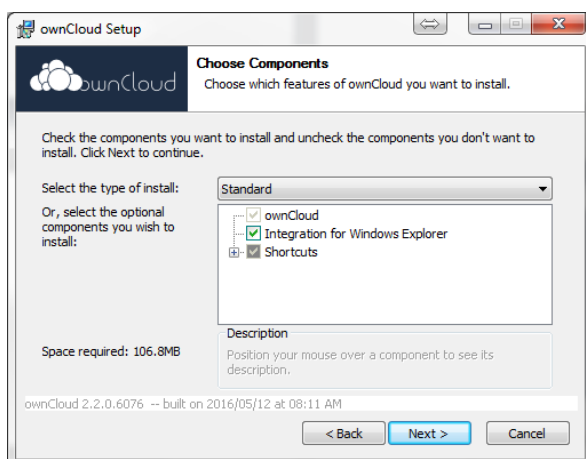
3. Next the installer will ask for the location of the software to be installed. Unless you want to change this, accept the default option by clicking 'Install'. The software will be installed.
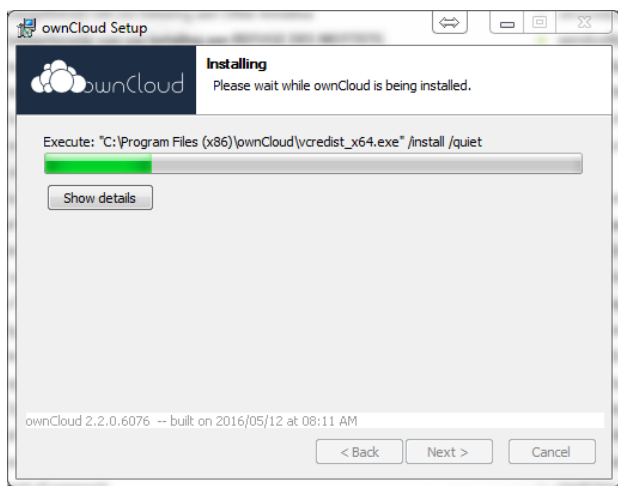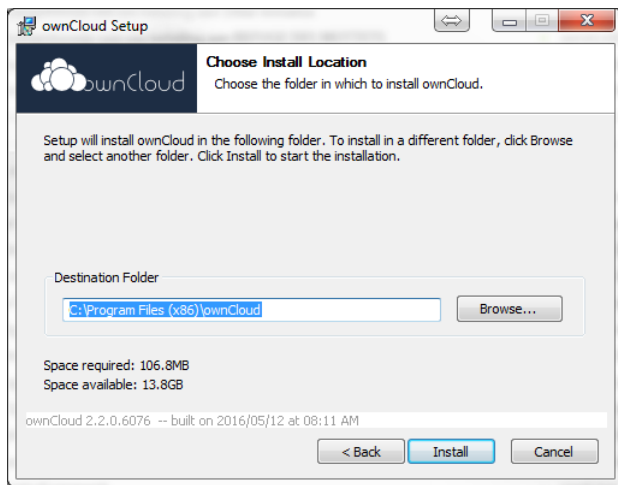
4. When the message 'Installation Completed' appears, click 'Next >', then click 'Finish'. The ownCloud Client will start up.

SOILCARE ownCloud user manual
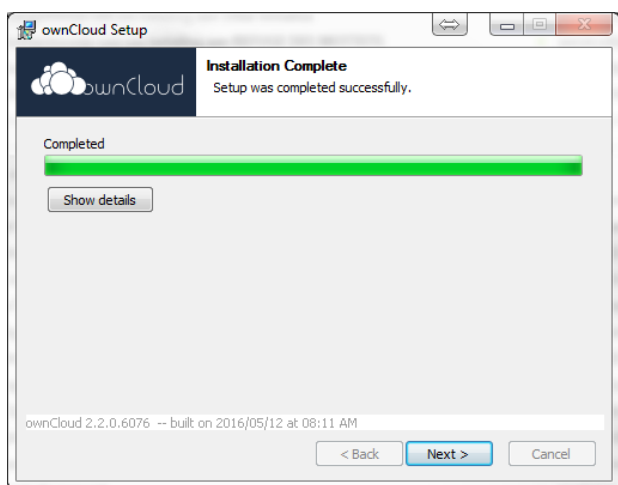
5. Now, the setting up of the ownCloud server will automatically be started, so please proceed directly with **paragraph 2.3 step 4** (you will see the 'Connect to ownCloud' screen appearing).

2.3. Connect the Desktop App to the SOILCARE ownCloud server

Steps 1-3 are only necessary if the ownCloud App has already been installed and you want to add a (new) ownCloud server to your system. If you have just installed the App you can proceed with step 3. If you have just installed the Desktop App, you will be taken to step 4 directly after this installation.

After installing the Desktop App on your computer, the connection to the SoilCare ownCloud server needs to be made.

1. Look up the ownCloud icon in the system tray (the icon might look slightly different).
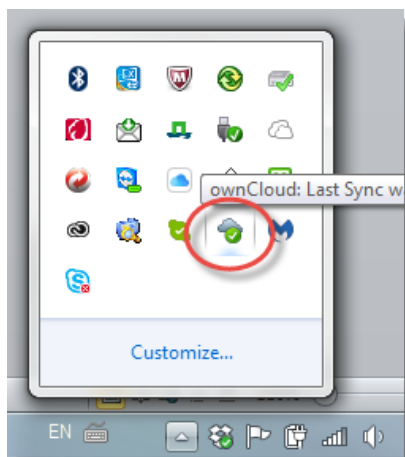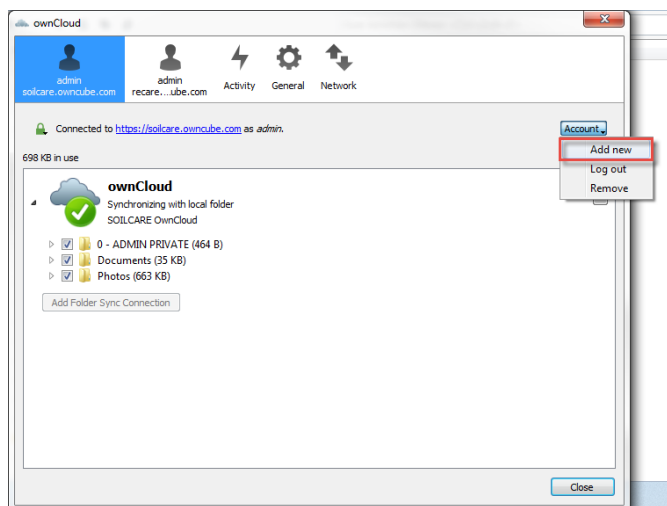

(continue on the next page)

SOILCARE ownCloud user manual

2. Right-click the ownCloud icon. A context menu will appear. Now select 'Settings…'. The settings menu will appear.
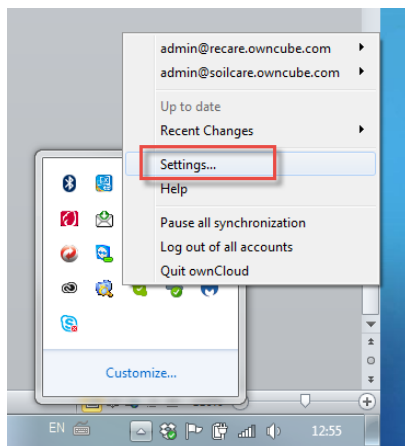

3. In the settings menu, click on 'Account' and select 'Add new'. The 'Connect to ownCloud'- wizard will start.

4. In the Server Address box, fill in the SOILCARE server address: '**https://soilcare.owncube.com**', and click 'Next'. (*note: the example below shows a different project*)


9
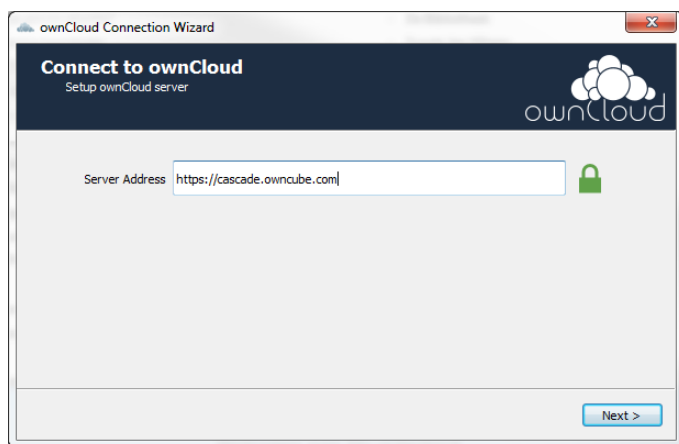
5. In the next screen, enter your username and password (first name in lowercase characters, first name in lowercase characters+99 – as described in paragraph 2.1, and click 'Next'.
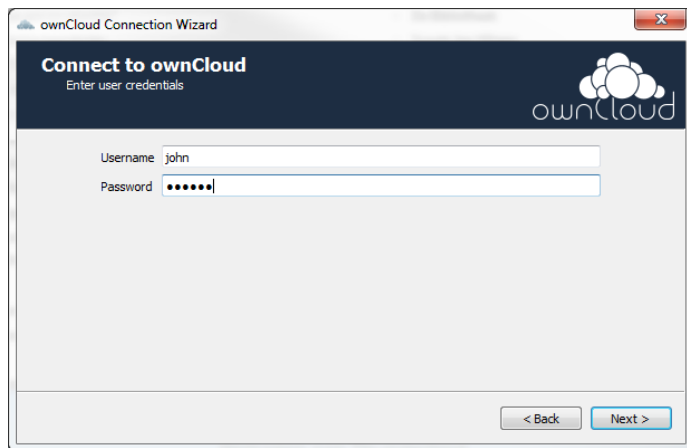
6. After entering your login, the wizard asks what you want to synchronize (download the files and folders when installing for the first time), and where to put the files on your hard disk.
    Default sync selection is: '**Sync everything from server (x.x Gb)**'.

    Also enter the location for the local folder. Default value is **c:\users\<user>\ownCloud**, where <user> is your Windows username.

    It is possible to alter this path if needed, by clicking on the button that indicates the path next to 'Local Folder'. If you want to use a custom folder, you should first create this and then select this new folder. A logical pathname could be: **c:\users\<yourusername>\SoilCare ownCloud** to make clear the path contains SoilCare files. <yourusername> is normally already filled in, specific for your computer. Do not change this name. (in the example below, the <yourusername> is 'elsen002'). You can also decide to put the storage on an entirely different disk. Click 'Connect…' when done.

10
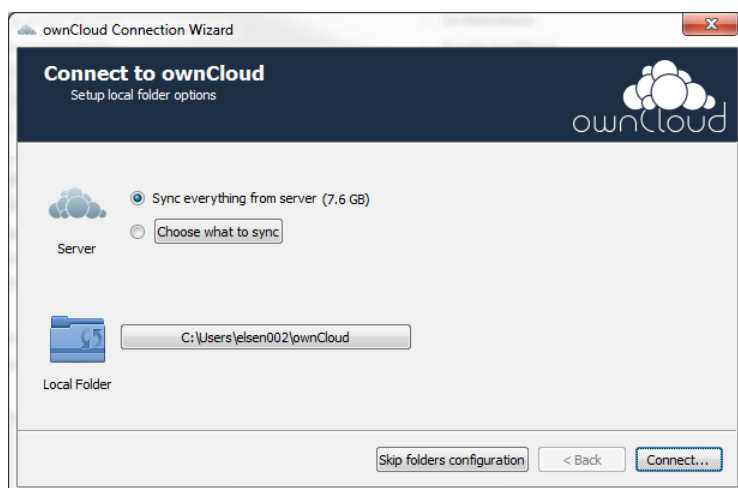
7. The setup wizard is ready now and starts synchronizing the server data (download the files and folders when installing for the first time) – you will see folders and files appearing in the path you installed, when you open Windows Explorer. Click either of the two buttons to open ownCloud in a browser window or to open the ownCloud folders using Windows Explorer. If you click 'Finish' the Wizard ends.
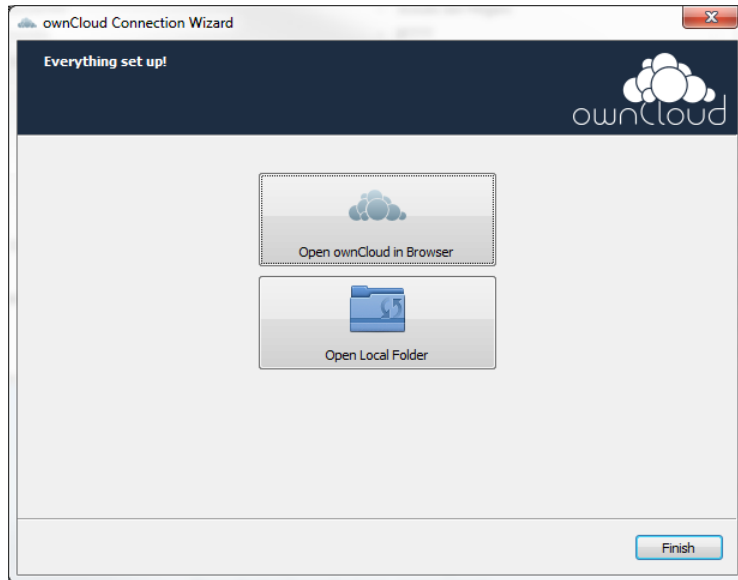
8. Below is the Windows explorer view after opening a similar folder as the 'SoilCare ownCloud' folder (*note: this is an example from a different project*).
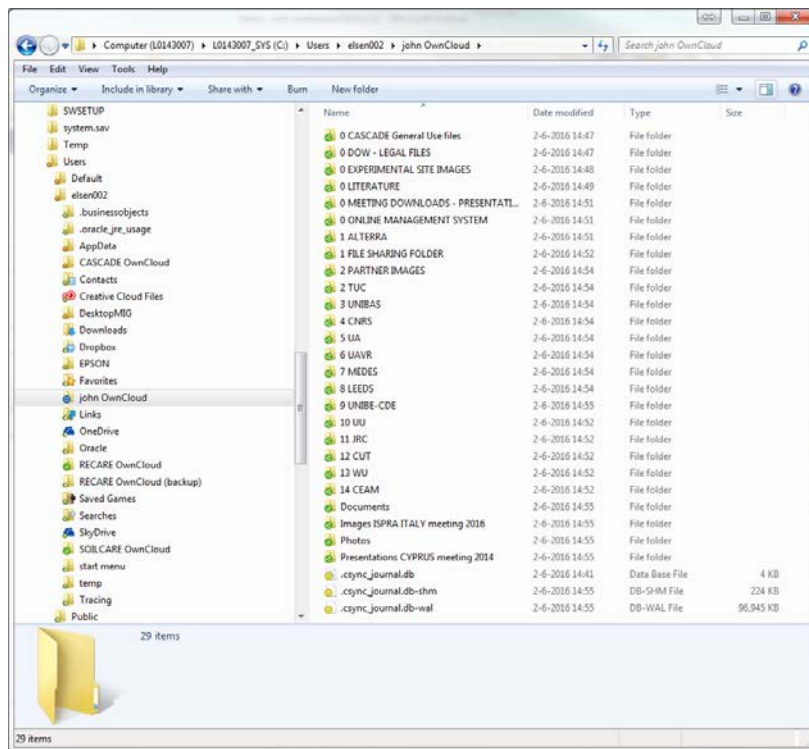
9. One important thing to do is make sure that the ownCloud App is started every time you start up your computer (if this is not done, file synchronisation is not performed).
To do this, look up the ownCloud icon in the system tray (the icon might look slightly different).
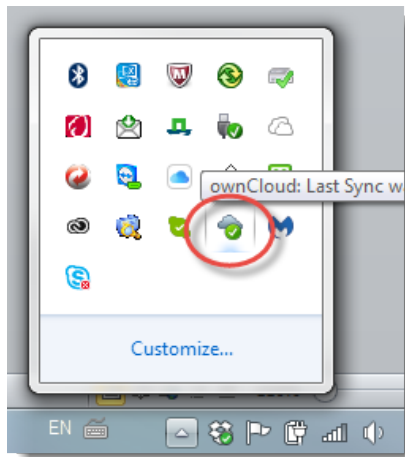
10. Right-click the ownCloud icon. A context menu will appear. Now select 'Settings…'. The settings menu will appear.
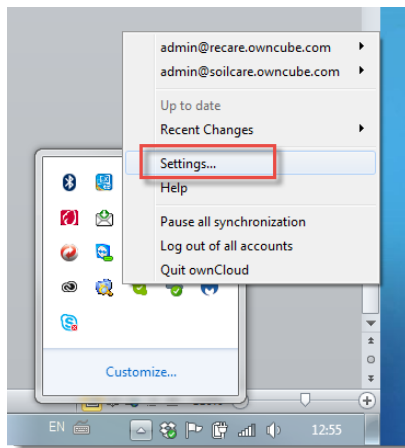
11. On the 'General' tab, tick the 'Launch on System Startup' option, then click 'Close'.

12
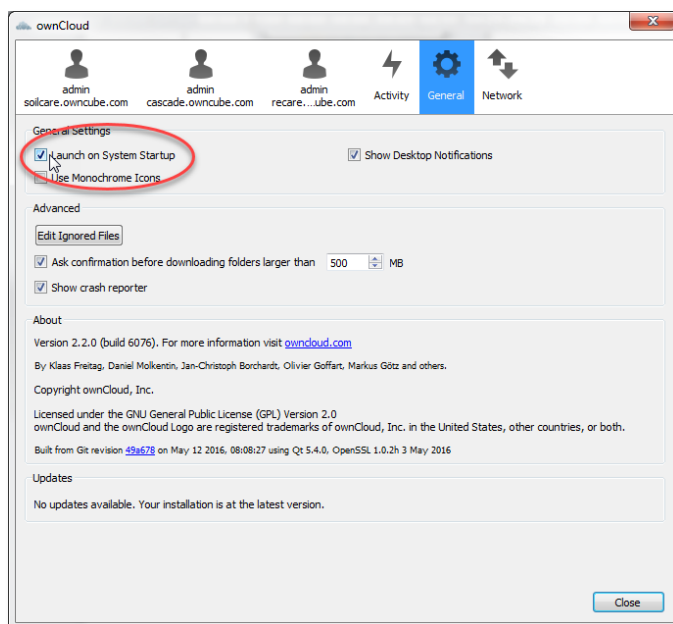
2.4.   Changing your password

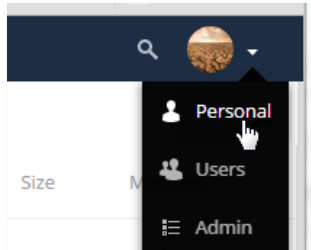If you want to change your password, proceed as follows:

1. Log in to ownCloud file exchange server as described in paragraph 2.1.
2. In the top right corner of the window, click open the dropdown menu (normally indicated by your name)and click on 'Personal'. The personal settings page will appear.

3. Scroll down to the 'Password' box, and enter your current password and the new password. Click on the 'Change password' button.
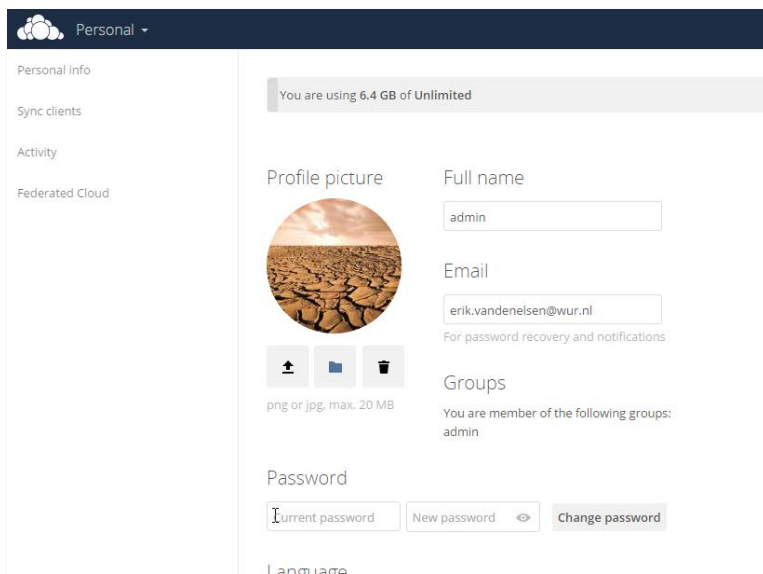

In the personal settings page, you can also set/change your profile picture (which was already done in the example above) and the display language. It is also possible to download the desktop Apps for various platforms. More information on the 'Personal' settings page can be found in the ownCloud user manual on page 57.

13

To return to the Folder view, click on 'Personal > Files' in the top left corner of the window.
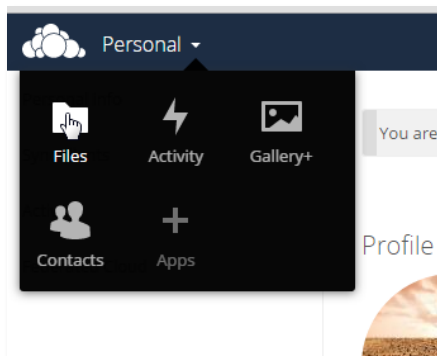
3. File and folder structure and permissions

The ownCloud file sharing service for SOILCARE has a number of files and folders with their own permissions, a (Windows Explorer) view of the folder structure is shown below (1st level folders only);
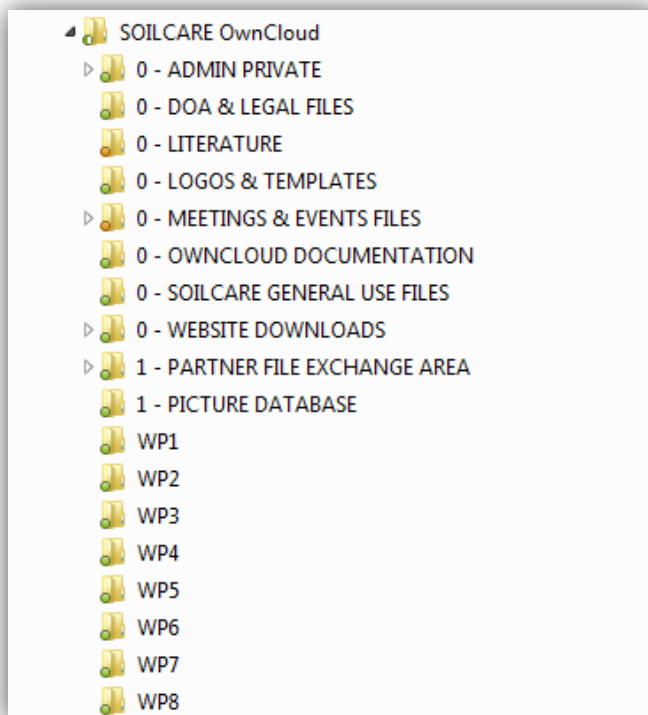
3.1. '0' level folders

These folders contain 'general project information', and are maintained by the coordinator. All other members have read only access.

3.2. '1 PARTNER FILE EXCHANGE AREA'

This folder contains a number of sub-folders as shown below. These folders are intended for file storage and exchange purposes, where the institute is owner of their folder, so each partner has read & write access to its own folder, while the other partners have read only access to that folder.
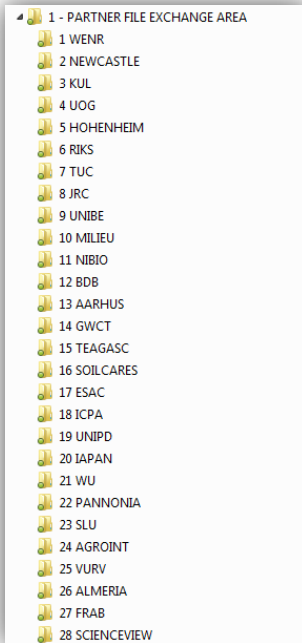
3.3. '1 PARTNER IMAGES'

This folder contains a number of sub-folders as shown below. These folders are intended for image exchange purposes, where the institute is owner of their folder, so each partner has read & write access to its own folder, while the other partners have read only access to that folder.
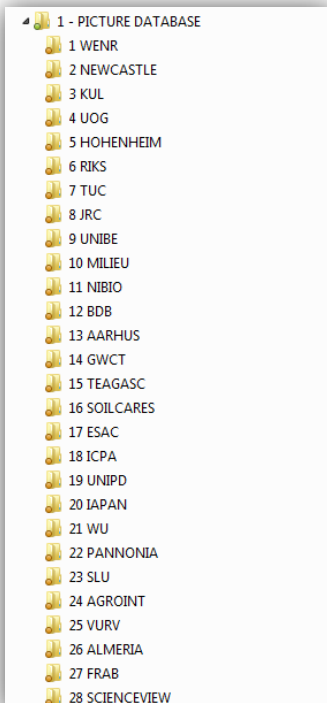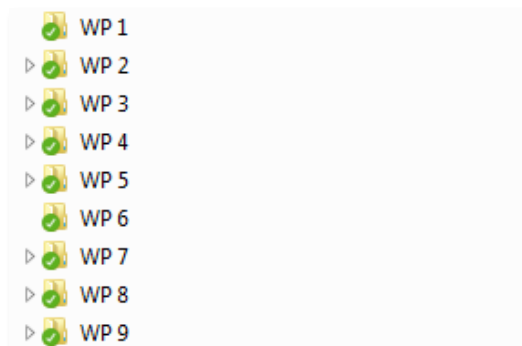
SOILCARE ownCloud user manual

3.4. 'WPx folders'

These folders are intended for file storage and exchange purposes, where the WP leader and deputy are owner of their folder, so these people have read & write access, the other partners have read only access.

The folder structure and folder permissions are shown in the table below:

OwnCould SOILCARE folder hierarchy and permissions			ACCESS		
			R = Read, R/W = Read/Write		
	FOLDERS on the ownCloud server (SoilCare.owncube.com)		ADMIN (R/W access)		USER
GROUP		SUBFOLDERS	Who?	Who?	(R access)
'0' folders					
	0 – ADMIN PRIVATE	NONE	coordinator	Erik	NONE
	0 - DOA & LEGAL FILES	NONE	coordinator	Erik	all
	0 - LITERATURE	NONE	coordinator	Erik	all
	0 - MEETINGS & EVENTS FILES	VARIOUS	coordinator	Erik	all
	0 - OWNCLOUD DOCUMENTATION	NONE	coordinator	Erik	all
	0 - SOILCARE GENERAL USE FILES	NONE	coordinator	Erik	all
	0 – WEBSITE DOWNLOADS	NONE	coordinator	Erik	all
'1' folders					
	1 FILE SHARING FOLDER	1 WENR	WENR	Erik, Rudi, Simone	all
		2 NEWCASTLE	UN	Mark, Liz	all
		:	:	:	:
		27 FRAB	FRAB	Gaetan, Goulven	all
		28 SCIENCEVIEW	SCIENCEVIEW	Chris, Manfred	all
	1 PICTURE DATABASE	1 WENR	WENR	All WENR people	all
		2 NEWCASTLE	UN	All NEWCASTLE people	all
		:	:	:	:
		27 FRAB	FRAB	All FRAB people	all
		28 SCIENCEVIEW	SCIENCEVIEW	All SCIENCEVIEW people	all
'WP' folders					
'WP' folders	WP1	?	1 WENR	Erik, Rudi, Simone	all all
	WP2	?	2 WENR 2	Oene, Gerard	allallall
	WP3	?	NEWCASTLE	Mark, Liz	allallall
	WP4	?	9 UNIBE	Gudrun, Abdallah	allallall
	WP5	?	3 KUL	Guido, Jan	allallall
	WP6	?	6 RIKS	Hedwig	allallall
	WP7	?	10 MILIEU	Melanie, Robert	allallall
	WP8	?	4 UoG	Jane, Julie	

4. Basic file operations: downloading, uploading and sharing files

This short chapter describes the basic file operations; downloading, uploading and sharing files. The other, more advanced, actions that can be performed with ownCloud, are described in the ownCloud user manual.

4.1. Using the SoilCare files that are synchronized to your computer in Windows Explorer

When you have installed the local Desktop App, all files are already available from the disk in your computer, since all files have been synchronized with your computer. How you can use the files, depends on the rights you have in the system; 'read/write' permission or 'read only' permission. The division of permissions over the different folders is described in chapter 3.

4.1.1. Using files with 'read only' permission

If you have 'read only' permission in a certain folder, you can open and read the specific file, but you cannot save any edits you have made in the file inside the SoilCare folders. You can, however, make a copy of the file and save edits somewhere else on your computer. You also cannot delete a file when the ownCloud synchronisation App is running. When you delete a file, it will disappear but it will re-appear after ownCloud synchronization (which will happen automatically).
When the ownCloud app is not running, synchronization is not happening and files will disappear from the local SoilCare folders after they have been deleted. When the ownCloud App is started again, deleted files will be downloaded from the server and appear in the folder again.

4.1.2. Using files with 'read/write' permission

If you have 'read/write' permission in a certain folder, you are considered the 'owner' of this folder and you can determine what files are available in this folder. This means that you can copy files to and delete files from these folders. Any changes performed on the SoilCare folders on your computer will be reflected on the identical folders on the SoilCare server and will also propagate to the folders of all connected users. You can also edit files 'living' in certain folders and save edits of these files in their folders. Again, these file changes will propagate to the files on the SOILCARE server and all connected users.

4.2. Using the SoilCare files in the web interface

When you have not installed the local Desktop App or you want to use the web interface to work on files, start your internet browser, go to the SoilCare ownCloud server https://soilcare.owncube.com and log in (see paragraph 2.1).

4.2.1. Using files with 'read only' permission

If you have 'read only' permission in a certain folder, you can open and read the specific file, but you cannot save any edits you have made in the file inside the SoilCare folders.

You can open a folder by clicking on its name. (*note: example below is taken from a different project*)
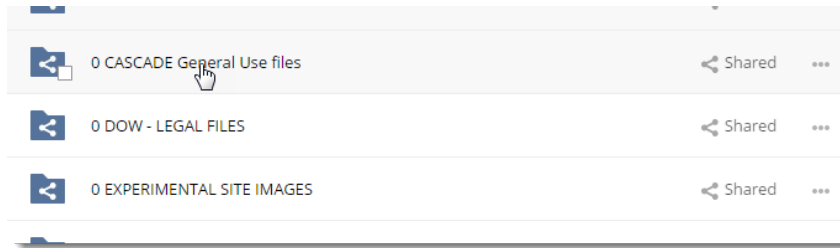

ownCloud can open a number of file formats inside the browser (a.o. .pdf files). When you click on a .pdf file, it will be opened inside the browser window. (*note: example below is taken from a different project*)
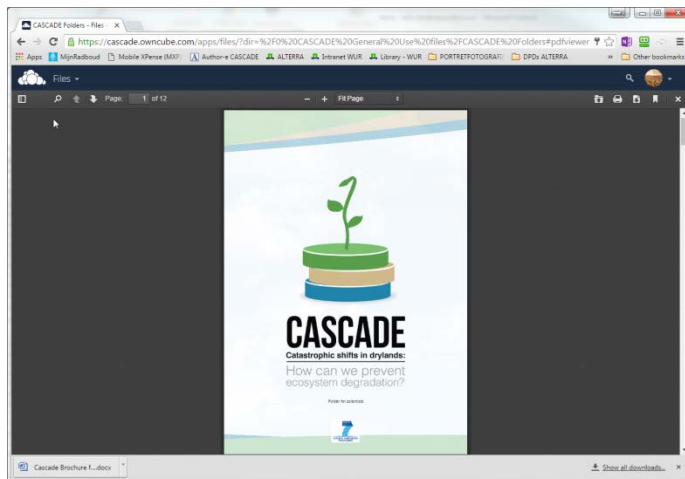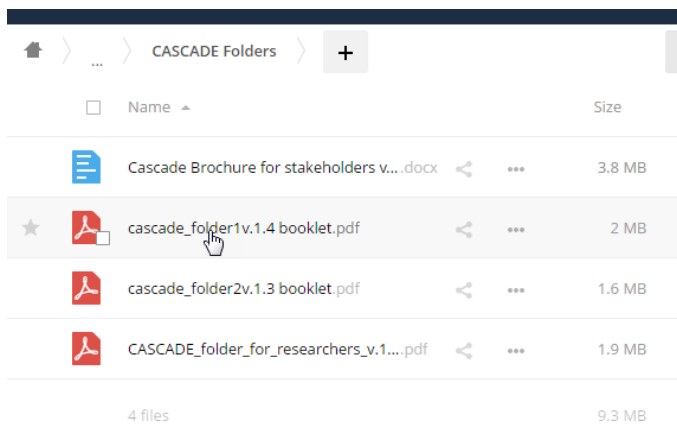

When a .pdf file is opened, you can download it to your computer or print it. You can close the .pdf viewer by clicking the cross on the top right corner of the window.

Certain other file types (such as .doc or .docx files) cannot be opened inside the ownCloud browser window. When these files are 'clicked', they are automatically downloaded.

When you want to download a file (e.g. a .pdf file) you need to: 1) first select it by clicking the small white square on the bottom right corner of the pictogram, and then 2) click the 'Download' button in the top bar. The file will now be downloaded. (*note: example below is taken from a different project*)
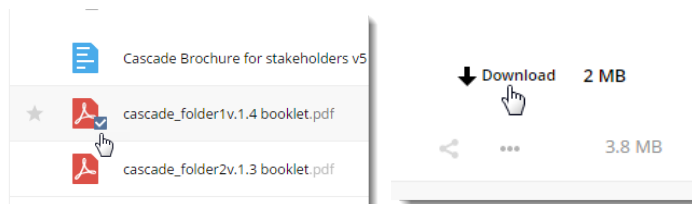
If you have read/write permissions on the current folder, you will also be able to delete the file. If you only have read permissions on the current folder, the 'Delete' button will not be visible.
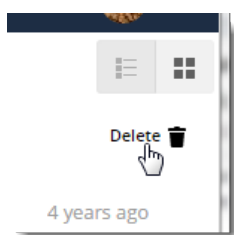

4.2.2. Using files with 'read/write' permission

If you have 'read / write' permission in a certain folder, you can open and read the specific file, and you can save any edits you have made in the file inside the SoilCare folders. To do this, you first need to download the specific file to your computer, edit it in the appropriate program, and then upload it again to the specific folder.

4.2.3. Downloading (and editing) a file

To download a file (e.g. a .pdf file) you need to: 1) first select it by clicking the small white square on the bottom right corner of the pictogram, and then 2) click the 'Download' button in the top bar. The file will now be downloaded. (*note: example below is taken from a different project*)
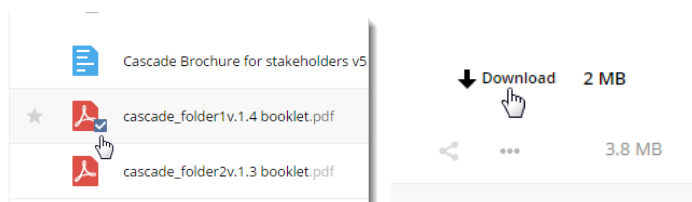
After editing the file, save it to a location on your computer. You can then upload the file to the ownCloud server by dragging it into the desired folder in the browser, see image below.
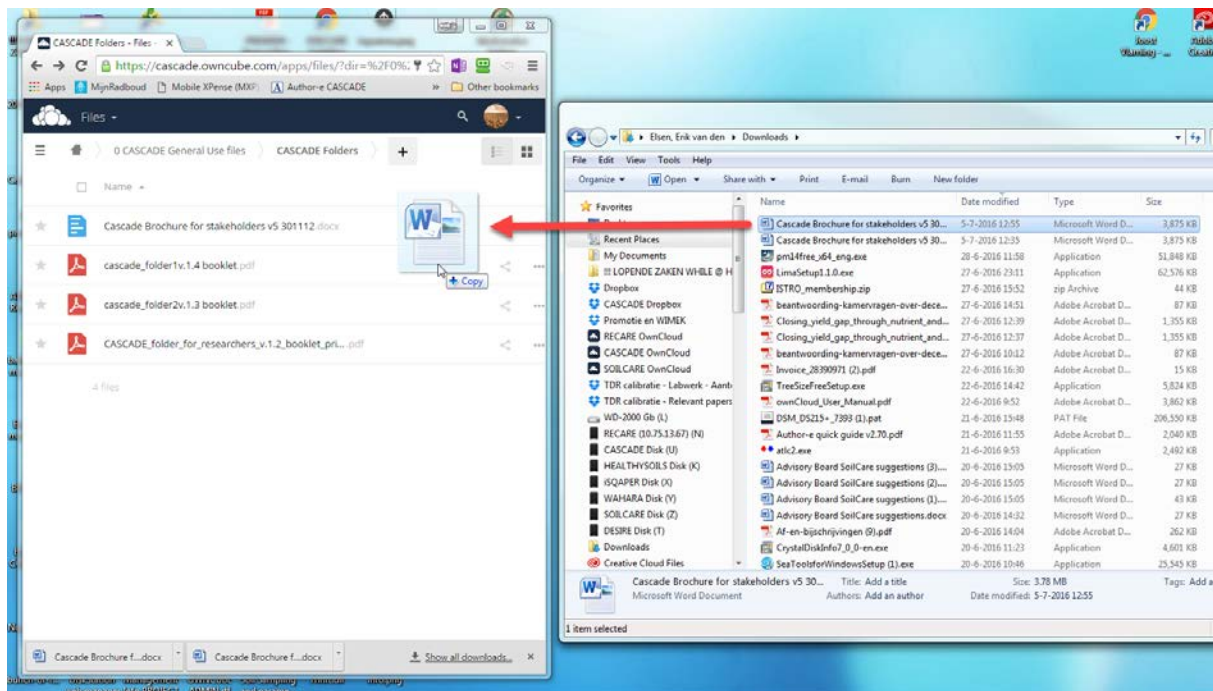
Figure 3 copying a file to ownCloud by dragging it from Windows Explorer to the ownCloud server browser window.

When the file you want to copy to ownCloud has the same filename as a file that already exists in the ownCloud folder, you will get a conflict warning, see the image below. Select one of the given options (Which files do you want to keep? -> New Files or -> Already existing files), and click 'Continue' .
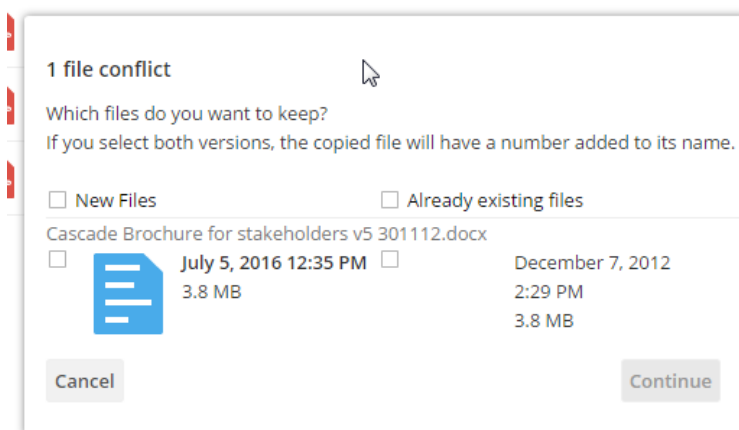

4.2.4. Deleting a file

If you have read/write permissions on the current folder, you will also be able to delete the file, by first selecting the file (tick the small white square on the bottom right corner of the pictogram of the corresponding file) and then clicking the 'Delete' button.

SOILCARE ownCloud user manual
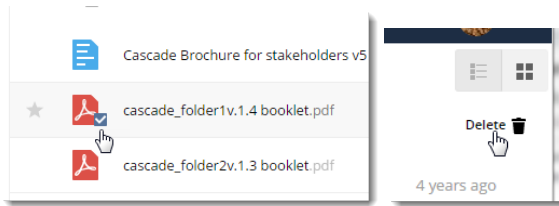
4.2.5. Uploading new file(s)

To copy multiple new files to a certain folder, simple select the files you want to copy to the folder on the ownCloud server, and drag the files from Windows Explorer window to the ownCloud browser window. Then release the mouse button and the files are added to the ownCloud folder.
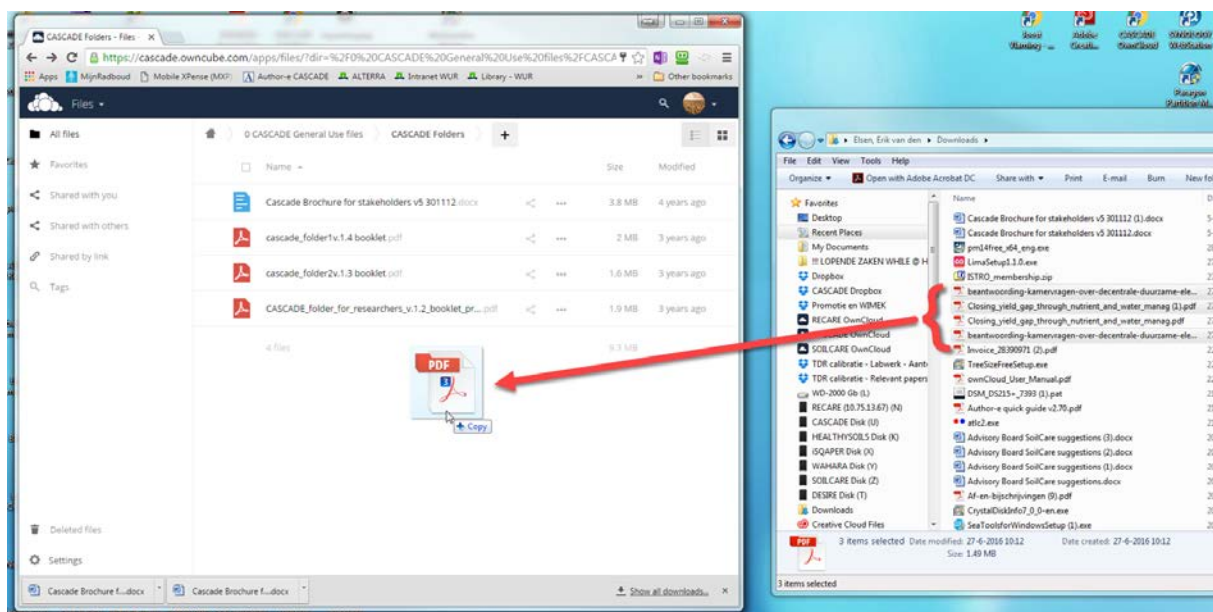
4.2.6. Creating and deleting folders

When you have read/write permissions on a folder, you can create a new (sub) folder by performing the following actions:

Click on the '+' symbol in the top bar of the ownCloud browser window, a drop-down menu opens. (*note: example below is taken from a different project*)

SOILCARE ownCloud user manual
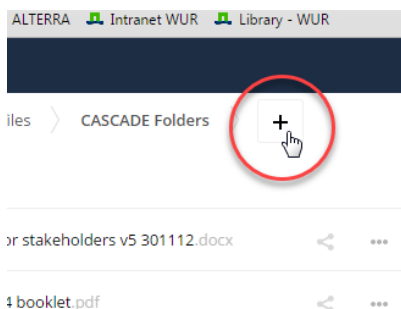
Click on the folder symbol; the name of the folder ('New Folder') becomes editable. Type in a name for the new folder and press the Enter button on your keyboard.

Now the new subfolder (' More files' in the example below) will be created in the current folder. (*note: example below is taken from a different project*)
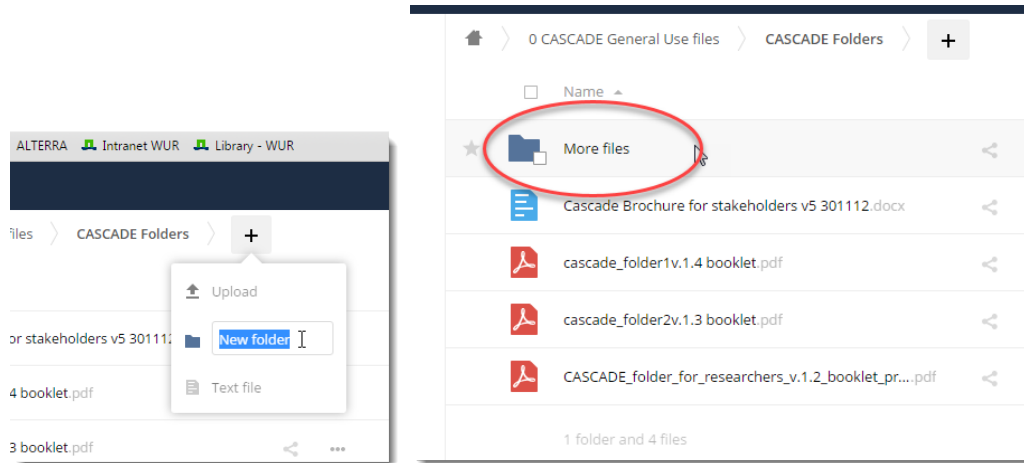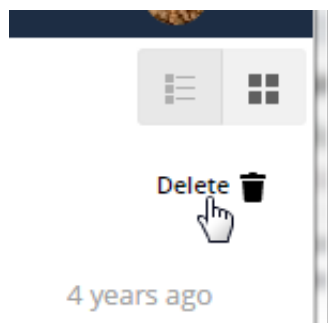

You can delete a folder (and its contents, be aware!) by performing the following actions:

Select the folder you want to delete by selecting it. You can select the folder by hovering over the folder symbol with your mouse pointer and then ticking the white selection box.
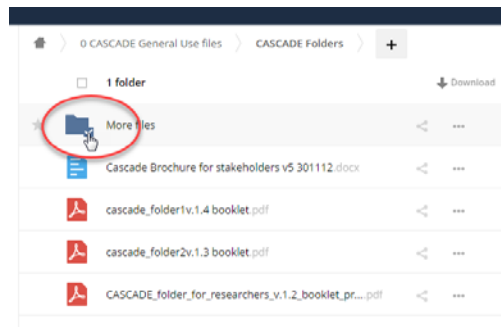

In the top menu, click the 'Delete' button, and the folder will be deleted.


4.2.7. Sharing files and folders

It is very easy to share files and folders from the ownCloud web interface. If you want to share a link to a file on the SoilCare ownCloud server, proceed as follows:

1. Browse to the file or folder you want to share with a link.
2. Click on the sharing symbol next to the file you want to share; a window will slide open from the right.
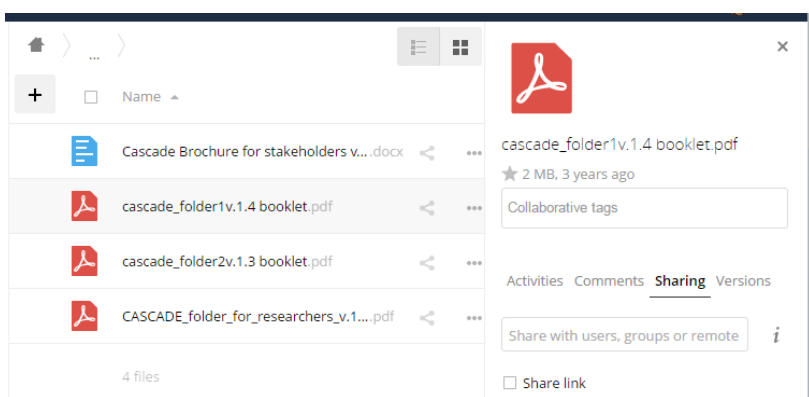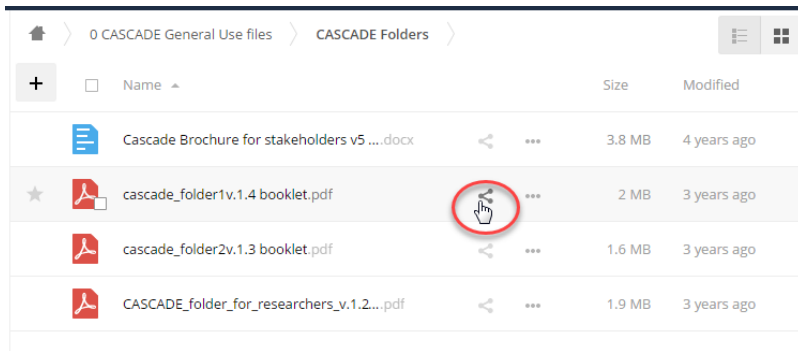
3. Tick the 'Share link' box on the bottom of the panel, a text box will open, with a unique hyperlink to the corresponding file.
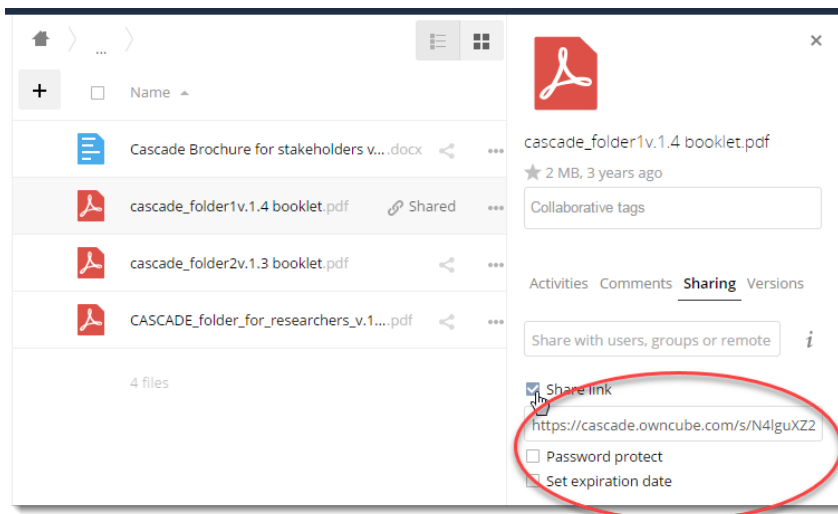
4. If desired, you can tick the 'Password protect' and 'Set expiry date' checkboxes.

5. Copy the hyperlink in the link box and paste it in an email to the person you want to share the file with. This person will now be able to download the file using the hyperlink.