Universität für Bodenkultur Wien

BOKU-IT

BOKUdrive – Sync and Share Online Storage

At https://drive.boku.ac.at members of the University of Natural Resources and Life Sciences have access to a modern Sync and Share online storage facility. The data of this online storage are stored on servers and in data centers of the University of Natural Resources and Life Sciences. The solution is technically based on the free software "Seafile".

Users can access their data via a web interface or synchronize via desktop and mobile clients. Seafile offers similar features to popular online services such as Dropbox and Google Drive.

The main difference is that Seafile can be installed as open source software on its own servers and its data is stored completely on servers and in data centers of the University of Natural Resources and Life Sciences.

Target group of the documentatio	BOKU staff, BOKU students
Please send inquiries:	BOKU-IT Hotline boku-it@boku.ac.at

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1 What is BOKUdrive ?

BOKUdrive is a Sync and Share online storage whose data is completely stored on servers and in data centers of the University of Natural Resources and Life Sciences.

The solution is technically based on the free software "Seafile".

Seafile is an open source cloud storage software - for storing data in your own private cloud and for synchronizing and exchanging or sharing this data as known from proprietary services like Dropbox or Google Drive.

The main difference is that Seafile can be installed as open source software on its own servers and its data is stored completely on servers and in data centers of the University of Natural Resources and Life Sciences.

BOKUdrive offers client-side end-to-end encryption. You can create encrypted libraries using this feature. Accordingly, it can be used to store sensitive data and sensitive research data.

A collection of folders is called a library in Seafile. Each library can (but does not have to) be synchronized separately. Libraries can be password protected by the user. The password is not stored on the server. This means that not even an administrator can view the files in a password-protected library.

BOKUdrive users can create groups where files can be shared or synchronized. There is also a Wiki and a discussion area. So teams can easily collaborate and exchange information.

You can use BOKUdrive directly via the web interface https://drive.boku.ac.at/ and/or install one of the Seafile Clients on your work and mobile devices. In addition, WebDAV is available as access method.

The possibility to edit Microsoft Office documents together and online at the same time completes the functional range.

Users currently have 20GB available. If this is not enough, this storage space can be expanded with COUCHstore assets (see point 5.4. on page 11).

2 BOKUdrive: First steps

- All BOKU members can use BOKUdrive directly, a separate activation by the respective institute's IT manager is not necessary.
- Log in with your usual BOKU access data in the web interface of BOKUdrive: **https://drive.boku.ac.at/**
- If you only want to share files with someone occasionally or provide storage space for uploading, the web interface is all you need.
- You download and install either the Desktop Client or the Seadrive Client if:

2.1 Seadrive Client vs. Desktop Syncing Client

Desktop Syncing Client

You want to edit files in one or more folders regularly on different computers and keep them in sync locally on the devices.

You want to share one or more folders with colleagues in a workgroup. Changed content should automatically be available locally to all people in a group without the need to manually download and upload files all the time

Seadrive Client

You want to have access to the files and folders as you are used to from a network drive, but you do not need a local copy or access to the files when you are offline.

2.2 Installation of the Desktop Syncing Client

On the following page you will find the Desktop Syncing Clients for different operating systems:

- https://www.seafile.com/en/download/

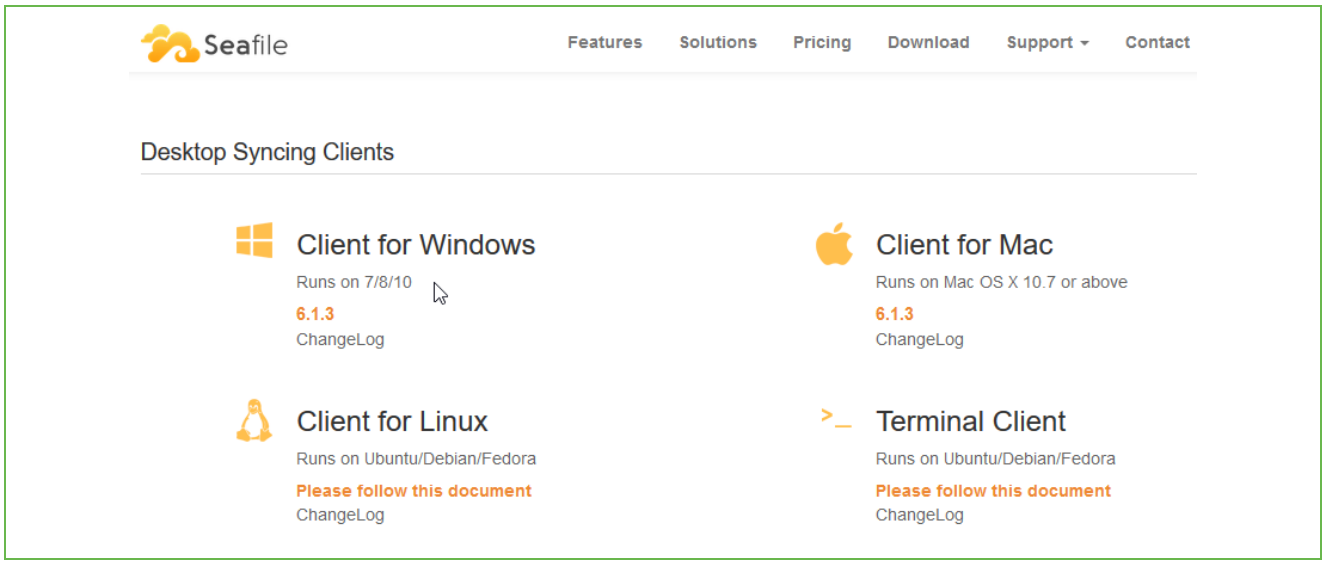


Figure 1

Select a location for the default folder of BOKUdrive:

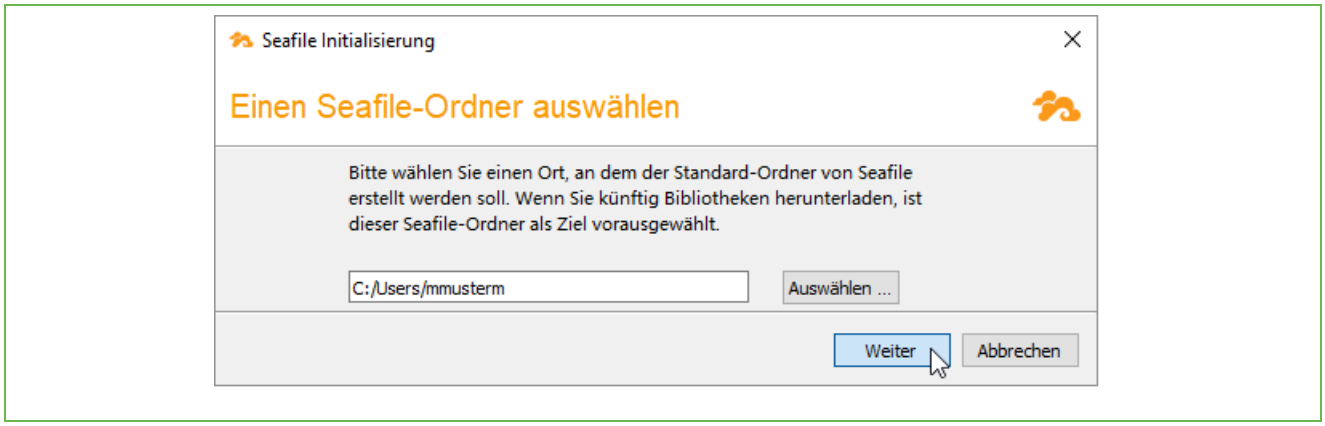


Illustration 2

As server name please enter the following (the protocol https is important!):

- **https://drive.boku.ac.at**

For username and password please enter your usual BOKU access data.

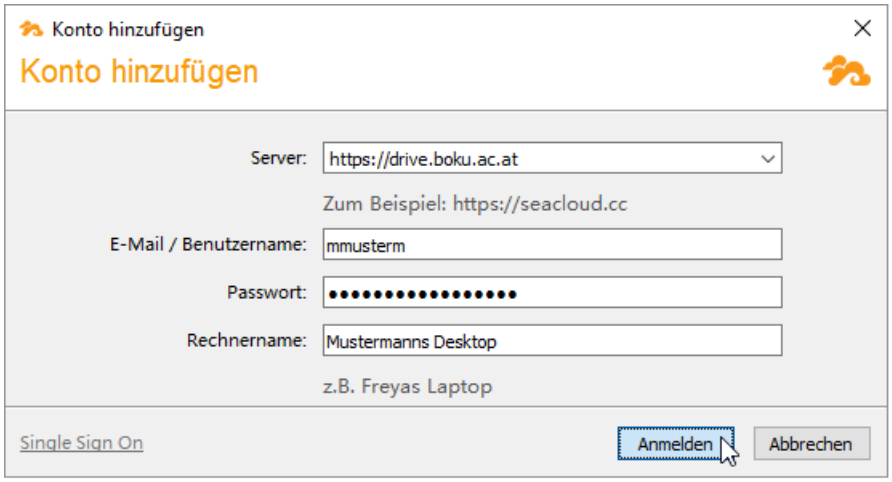


Illustration 3

You should answer 'Yes' to the following question if you want a local copy of your default library to be created and automatically synchronized:

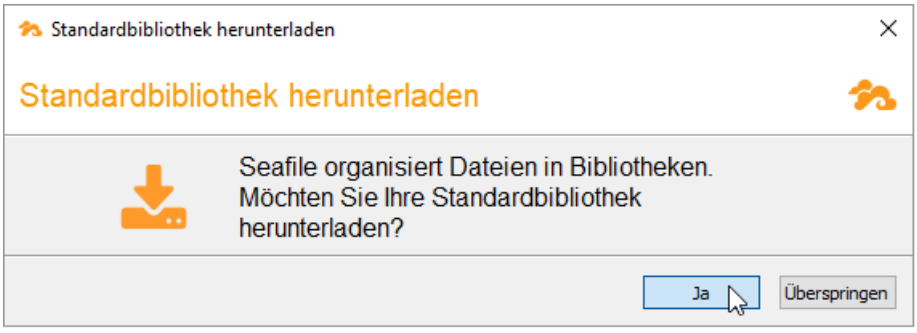


Illustration 4

If you skip this step, no data will be synchronized. However, you can set up synchronization for each library at any time.

In the Seafile main window, you can activate or deactivate synchronization to the local PC for each library separately at any time, even at a later date:

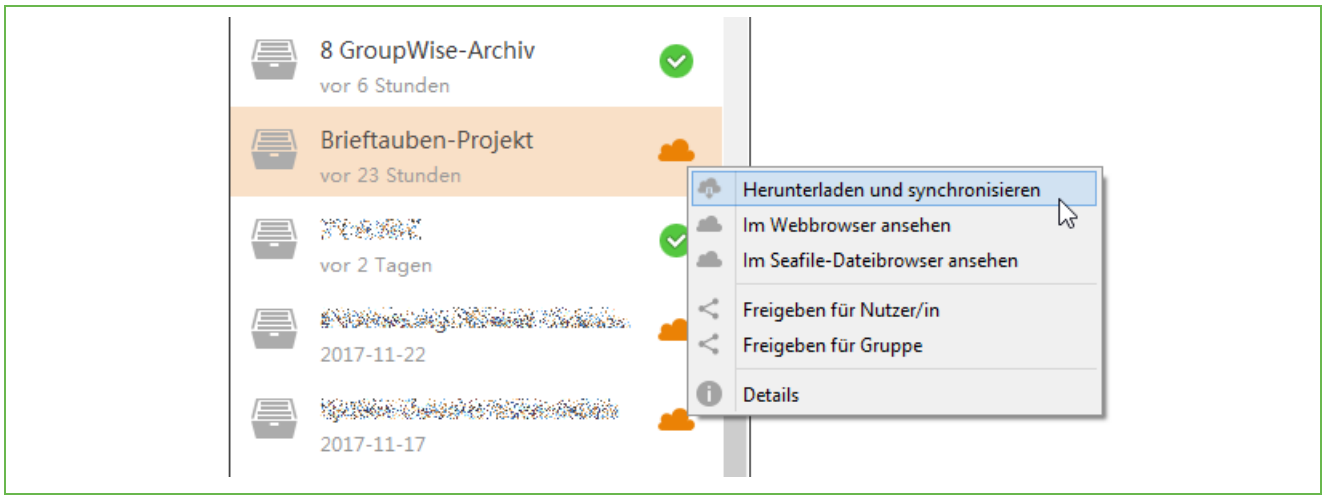


Illustration 5

At https://drive.boku.ac.at/help you will find further step-by-step instructions.

Since the Desktop Syncing Client allows you to synchronize server data locally to your device, you may need to take appropriate measures, as with other data stored locally on your device, to prevent unauthorized access to the data, for example, by using encryption software (e.g., BitLocker on Windows or FileVault on macOS) if the device is lost.

3 Shares, links and groups

3.1 Download and Upload Links

You have the possibility to create links for libraries, folders or files which allow downloads and uploads for all - also BOKU external - people who know the link. Optionally, these links can also be password protected.
See also: https://help.seafile.com/sharing_collaboration/sharing_files_and_folders/
Note: Creating links is only possible with *unencrypted* libraries!

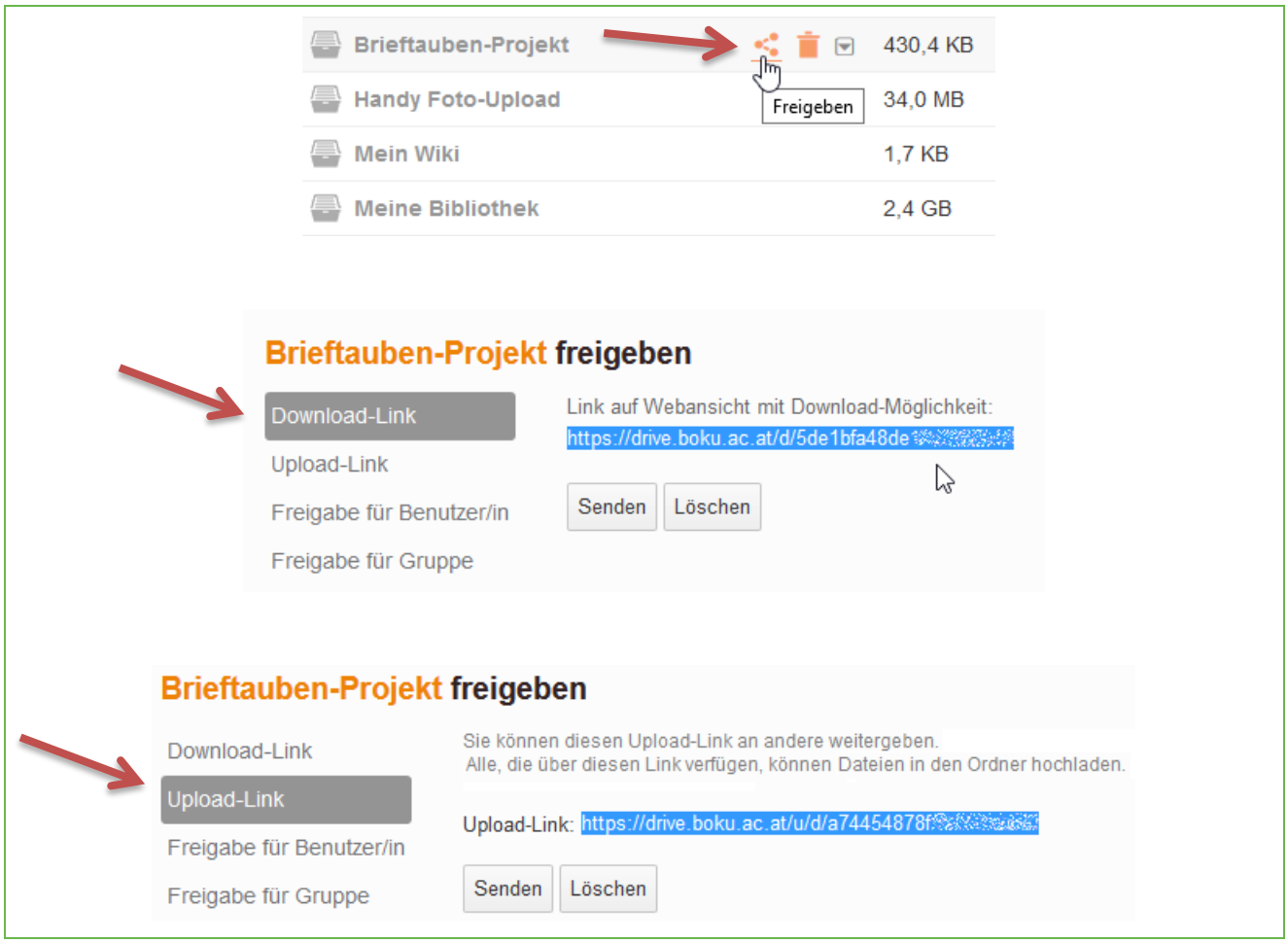


Illustration 6

3.2 Approvals

You have the possibility to share libraries or folders with other BOKUdrive users or groups and to specify whether this sharing should be "read only" or "read and write". (Sharing is only possible with *unencrypted* libraries!)

See also: https://help.seafile.com/sharing_collaboration/sharing_files_and_folders/

If you are not satisfied with the upload and download links described in section 3.1when working with external contributors, you can also share your work with external contributors by "inviting" them with your external e-mail address as described in section 8.3 "Inviting external contributors". With this invitation, a BOKUdrive account can be registered automatically. After that, nothing stands in the way of a collaboration with external contributors.

It is also possible to have a function account created by the IT managers of your organizational unit, which you can then make available to your project partners.

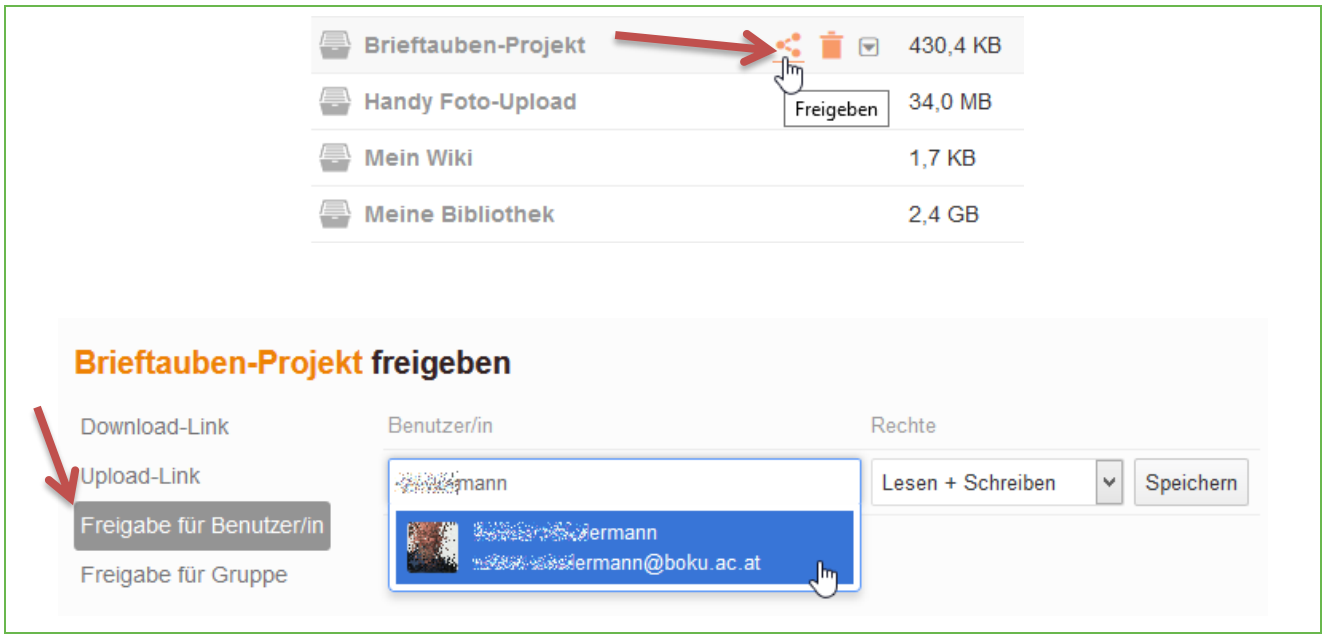


Illustration 7

3.3 Groups

Creating groups is an easy way to share data with a selected number of BOKUdrive users.
Each group has a group admin, who can appoint several additional group admins or transfer the ownership of the group to someone else.
Group admins can add new members or remove members.
Siehe dazu auch: https://help.seafile.com/sharing_collaboration/groups_managing

4 What do I have to pay attention to?

- The folder or library to be synchronized must be on a local hard disk and NOT on a network drive for synchronization to work.
- Data is protected by double replication, file versioning and snapshot functionality, so no additional backup is available by default. If you would like to have additional backups of libraries, please contact the BOKU-IT hotline (boku-it@boku.ac.at).
- If you decide to install the Seadrive client under Windows (not to be confused with Desktop Syncing Client!), your BOKUdrive library will be mounted like a network drive.
    - By default, the drive letter S: is used here, so the OES drive S: (\\\Serversoft) would then no longer be accessible. In this case, please select a different drive letter in the Seadrive Client settings.
    - On notebooks without a permanent Internet connection, Seadrive Client will often display error messages that the server is not accessible. Using Seadrive Client is usually less useful here, the Desktop Syncing Client is recommended.
- The access via WebDAV is done via https://drive.boku.ac.at/webdav. For authentication, please use **your standard mail address** instead of your BOKUonline login name.
- Files and folders from encrypted libraries can NOT be shared, furthermore these libraries can NOT be accessed via WebDAV
- The maximum file size when uploading or the maximum download size per folder via web interface is currently 15 GB.
- To ensure data security, when you delete a library on the Web interface, the data on your computer is not deleted, but simply no longer synchronized. The same applies vice versa.
- When you delete a library that you've shared with someone, you only remove your share from that library; the library and the data itself are not deleted.
- Only the owner of a library or folder can perform sharing actions. It is not possible for users who can only gain access through a share to share.
- If you create a download or upload link and rename the shared object, the link becomes invalid.
- If a shared folder is renamed via Seafile, the share remains the same.
- Changes of your standard e-mail address will result in new rights in BOKUdrive - in such cases please contact the BOKU-IT hotline (boku-it@boku.ac.at)

5 Features (selection)

5.1 Encryption

BOKUdrive offers client-side end-to-end encryption. You can create encrypted libraries using this feature. The contents of files in the encrypted libraries are encrypted on the client side. The password for encryption is not transmitted to the server. This prevents even administrators of the server from accessing the contents of your file.

Siehe auch: https://drive.boku.ac.at/help/encrypted_libraries/

5.2 File versioning, snapshots

Within 30 days it is possible to access or restore old versions and files/directories deleted in the period. With the snapshot functionality you can reset an entire library to an older version.

5.3 Seadrive Client vs. Desktop Syncing Client

Desktop Syncing Client

You want to edit files in one or more folders regularly on different computers and keep them in sync locally on the devices.

You want to share one or more folders with colleagues in a workgroup. Changed content should automatically be available locally to everyone in a group without the need to manually download and upload files all the time

Seadrive Client

You want to have access to the files and directories as you are used to from a network drive, but you do not need a local copy or access to the files when you are offline.

5.4 Extension with COUCHstore Assets possible

If you need more space than the standard quota you can expand the available storage space with COUCHstore assets. See our service pages at https://short.boku.ac.at/it-couchstore.

6 Application scenarios

- Backup or synchronization of your GroupWise archive
- Easy synchronization of files that a user wants to access quickly and from any location from different devices (desktop, tablet, cell phone) (Mobile Sync & Share "My Documents")
- Storage and retrieval of files for all common operating systems (Windows, Mac OS, Linux, iOS, Android)
- Collaborative work (teamwork) of several users, or project-based collaboration of a spatially distributed team (project and group drive)

- shared, simultaneous online editing of Microsoft Office documents
- Collaboration with large datasets through the extension with COUCHstore assets
- Data storage as well as backup of important files in case of missing backup possibilities (network drive and storage)
- Cross-platform access via web browser and WebDAV
- Alternative for sending large e-mail attachments as well as USB sticks, CDs, DVDs, Blu-rays and external hard drives

7 Differences between BOKUdrive and FiLR

In the following some differences to the already existing FiLR solution:

- The data is NOT stored on Open Enterprise servers and is therefore not available via OES client.
- End to end encryption
- Versioning, Snapshots
- File Locking
- Seadrive Client
- Linux GUI and Terminal Client
- Cross Platform File Syncing
- Delta Sync - Only differences are transferred, especially useful for large files
- Extension with COUCHstore Assets possible
- The data is protected by double replication, versioning and snapshots, so no classic backup is made by default

8 Appendix: Step-by-Step Instructions

8.1 Backup or synchronization of your GroupWise archive

You can use BOKUdrive to create a backup of your GroupWise archive. Due to the versioning and snapshot functionality of BOKUdrive, the data is protected against cryptotrojan or similar attacks and is also available on other computers due to the synchronization functionality.

Requirements:

- GroupWise archive, see also https://short.boku.ac.at/kqxrp
- Installed Desktop Syncing Client
- no automatic archiving activated

To make a backup of your GroupWise archive via BOKUdrive, proceed as follows:

1. Determine the location of your GroupWise archive on your local hard drive by selecting the File Locations tab in your GroupWise client under Tools -> Options -> Environment - in our example, this is D:\DATEN\BOKU\gwarchiv **:**

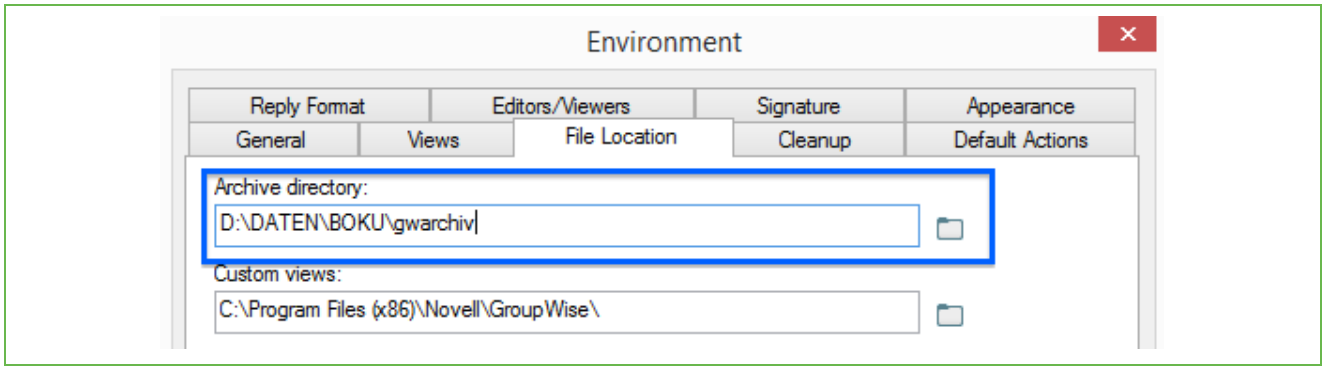
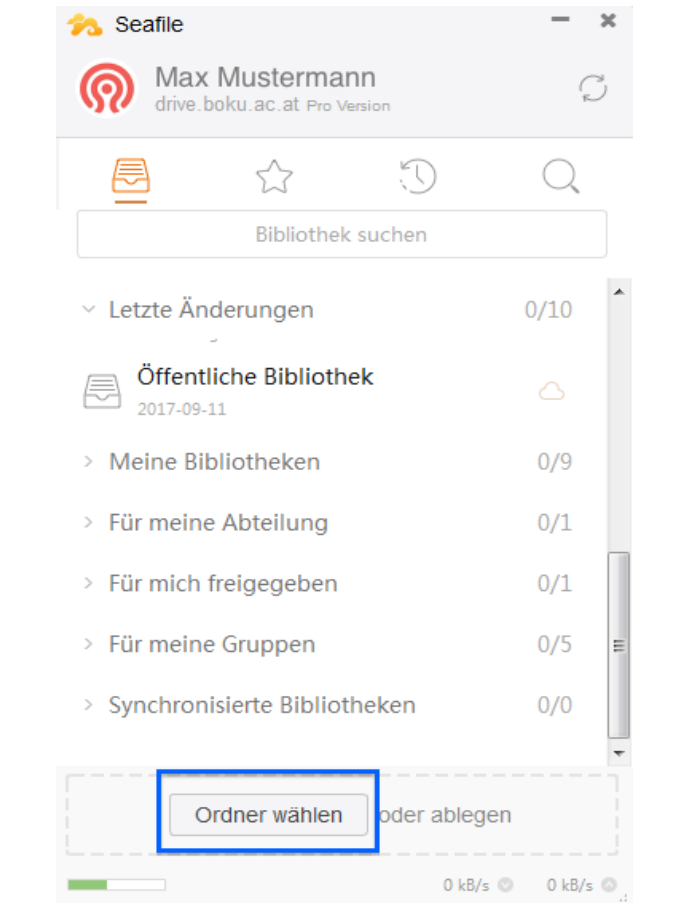


Figure 8GroupWise archive location

2. Start the Seafile Desktop Syncing Client or open the main window (either by right-clicking on the tray icon and choosing "Main Window" or by double-clicking the program shortcut that is on your desktop by default)

3. Select the "Select Folder" item and, in the selection window that appears, navigate to the location of your GroupWise archive that you determined in step 1 (Figure 9) - in our example, `D:/DATA/BOKU/gwarchiv` :



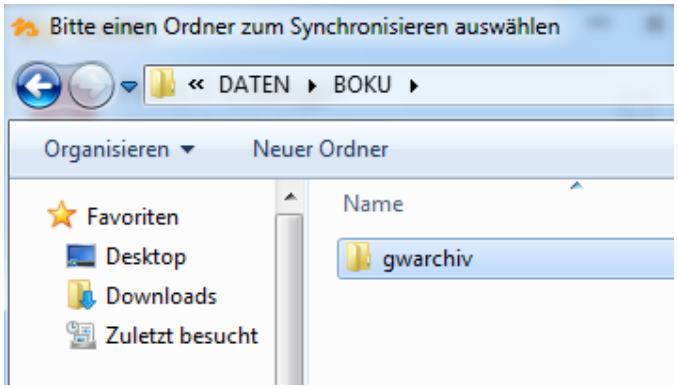


Figure 910Navigating to the GroupWise Archive Location

4. The Desktop Syncing client now asks you to create a library in which the backup of the GroupWise archive should be saved to BOKUdrive in the future - we choose a meaningful name without spaces or special characters. We have the additional option to create this library encrypted - after the GroupWise archive is already encrypted we do not need to do this step:

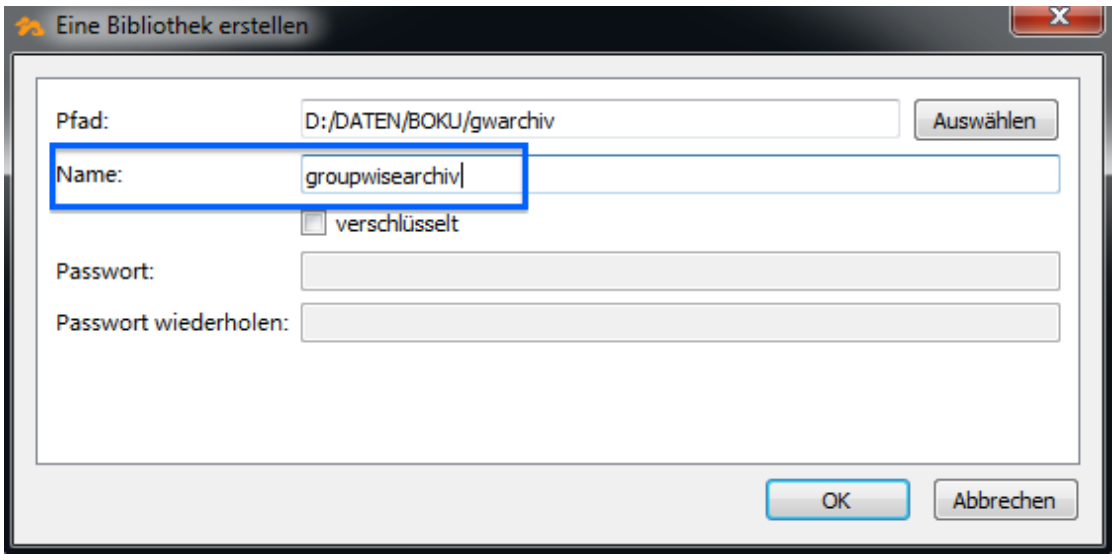


Figure 11Creating a library

After you confirm the dialog with "OK" the Desktop Syncing Client starts to synchronize your data.

This may take some time, depending on the size of your GroupWise archive and your Internet connection.

You can follow the progress in the main window of the Desktop Syncing Client - if you see a green cloud with a check mark, the synchronization is complete.

You have now created a full backup of your GroupWise archive. The Desktop Syncing client will automatically ensure that any changes to your GroupWise archive are synchronized immediately - meaning that any item you put in the archive will be backed up and available to other computers shortly thereafter.

In the next step we will show you how you can now access the backup you have just created with other computers.

To access a GroupWise archive synchronized via BOKUdrive on another computer, proceed as follows:

IMPORTANT: The prerequisite is that you can create the same directory structure on this computer as on the source computer of the GroupWise archive - i.e. in our example we need to be able to create a directory `D:/DATA/BOKU/gwarchiv` on the "new" computer as well. This is necessary because the GroupWise client stores the location for the GroupWise archive on the server side and therefore it is the same for all GroupWise clients.

If you change the location of your GroupWise archive in the GroupWise client, the change affects ALL GroupWise clients that you use.

Please exit GroupWise on the computer on which you are performing the following steps and do not restart GroupWise on that computer until synchronization is complete. In the meantime, you can use GroupWise on other computers without any problems.

1. Following our example, we will create the same folder structure on the machine where we want to access the GroupWise archive as on the source machine:

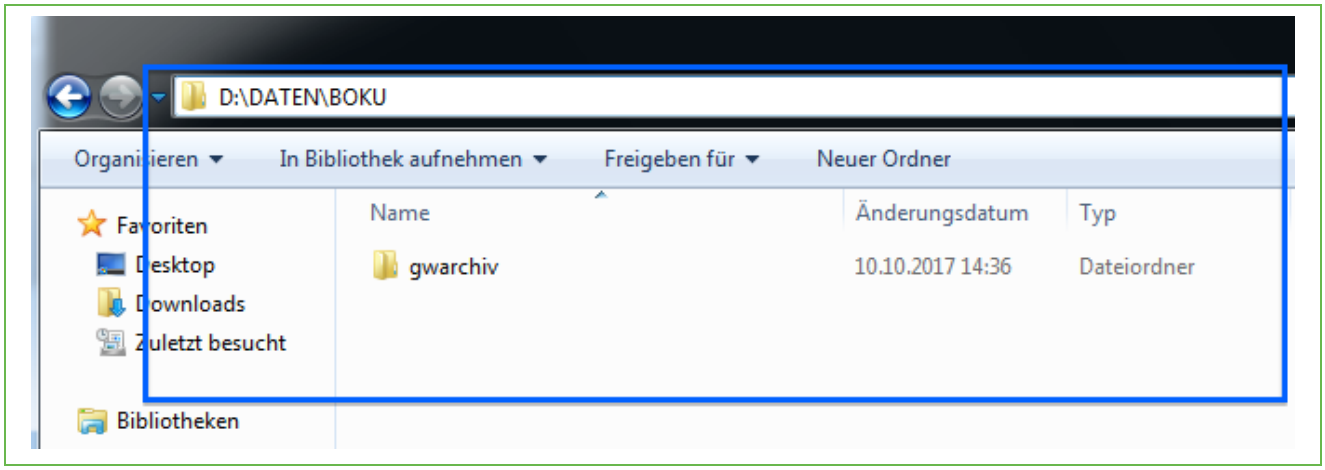


Figure 12Creation of identical folder structure

2. In the Desktop Syncing Client main window, we right-click on the GroupWise archive library "groupwisearchiv" and select the item "View in Seafile File Browser", see Figure 13:

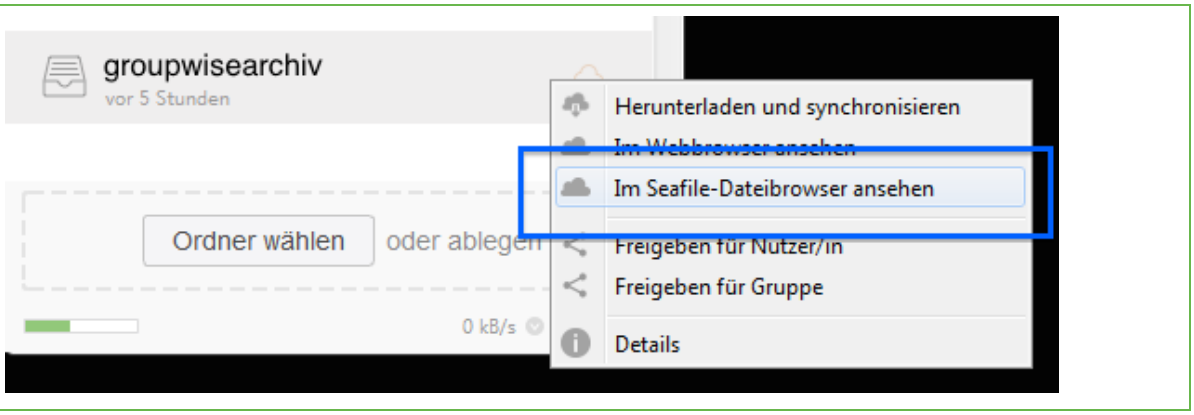


Figure 13Displaying the library in the Seafile file browser

3. In the Seafile File Browser you should now see a folder with a name in the form `of< xyz> arc`, where < xyz> is an individual 3 digit ID.
We select this folder with the right mouse button and from the appearing context menu the item "Synchronize this folder", see Figure 14:

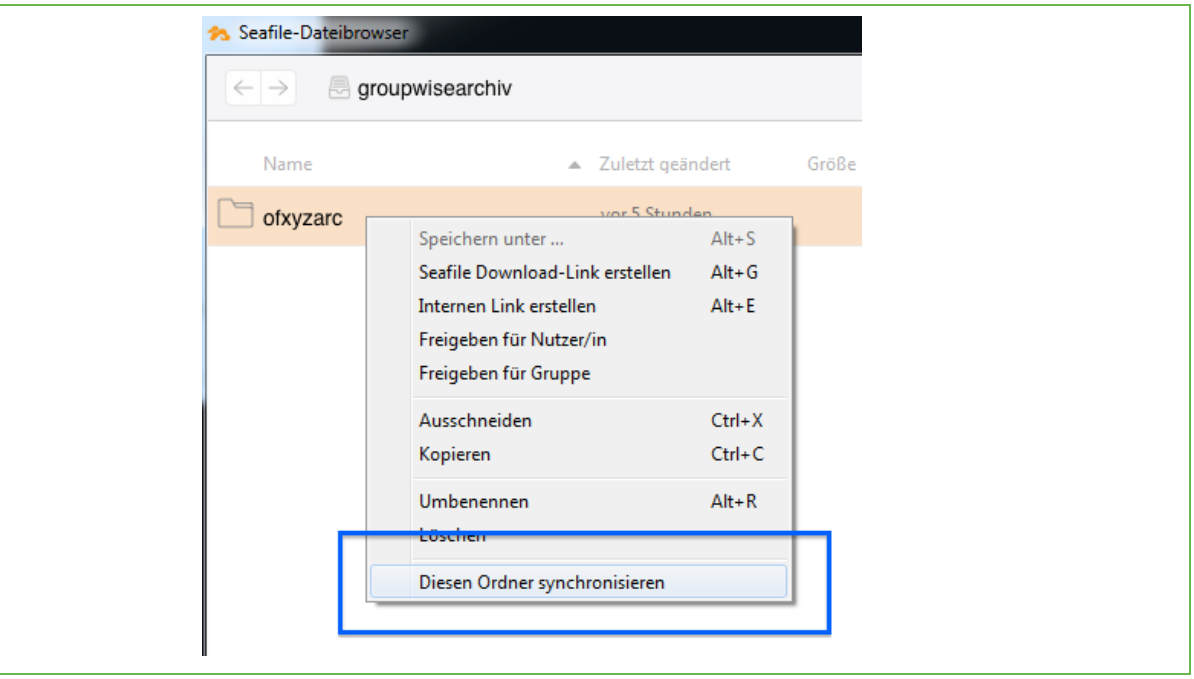


Figure 1415Selecting a folder for synchronization

4. A dialog appears in which we specify the folder created in step 1 as the target of the synchronization by selecting the created folder with the button "select" and confirming this selection with "Select folder":

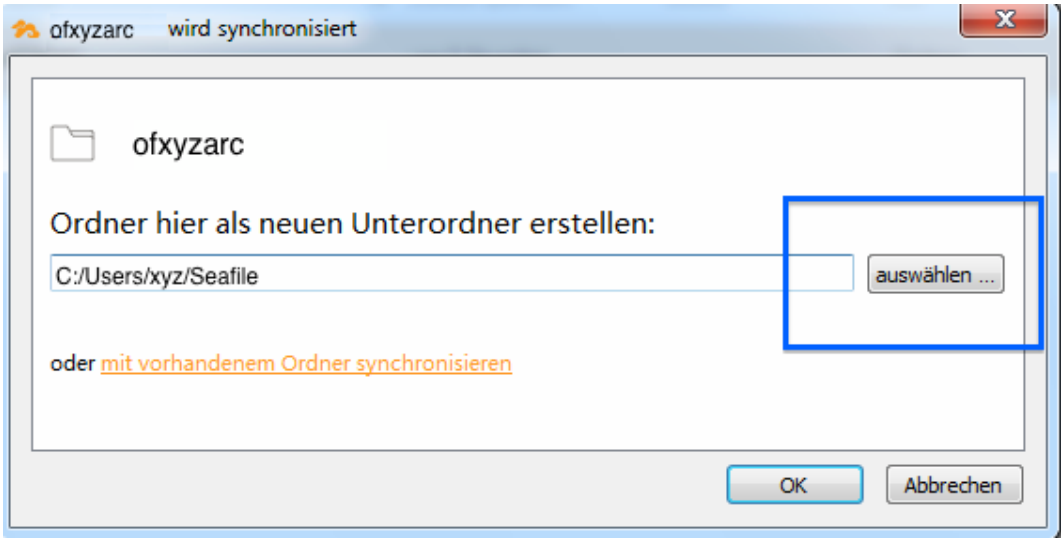


Illustration 16

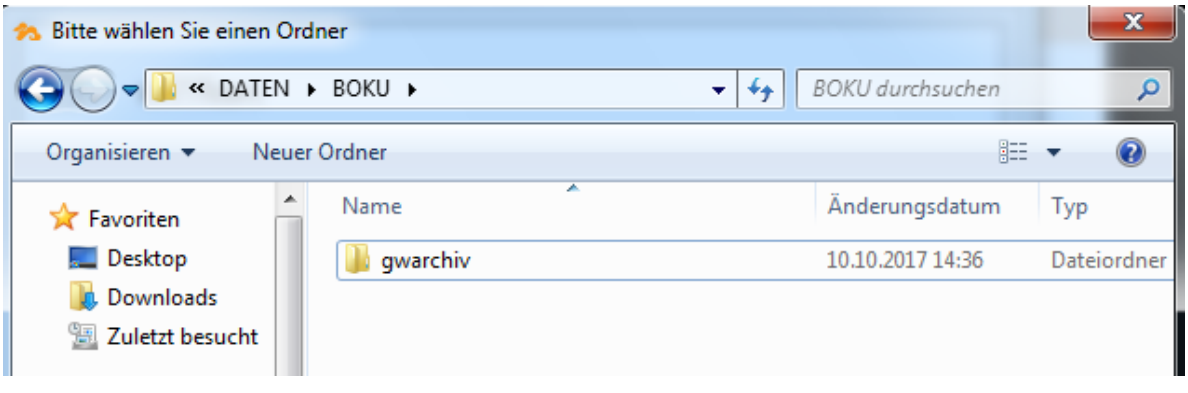


Illustration 17

5. Following our example, after clicking on "Select Folder", a dialog like the one shown in Figure 9 should appear. The correctly selected folder is important to create the exact same folder structure as on the source computer.

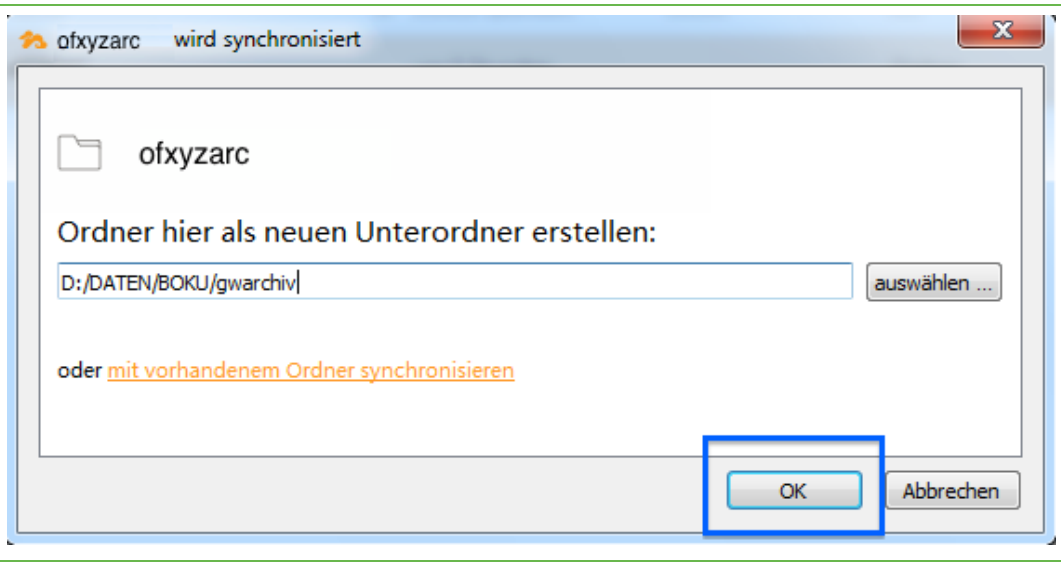


Figure 18Synchronize folders

6. After you have confirmed with OK you can watch the synchronization process in the main window of the Syncing Client. Again, if you see a green cloud with a check mark, the synchronization is complete.
7. If everything worked fine, there should now be a folder `ofxyzarc` with your GroupWise archive data in the directory `D:/DATA/BOKU/gwarchiv`.

You can now open your GroupWise client on this computer and use it to access your archive as usual.

In fact, thanks to the synchronization that has been set up, it is now irrelevant on which computer you carry out the archiving - that is, you can archive in the office and at home, for example, and both computers will each have access to the complete archive.

However, simultaneous archiving on two different computers or the use of automatic archiving is not recommended.

While you are archiving to one machine, do not use the GroupWise client on any of the additional synchronized machines to avoid compromising the integrity of your archive.

8.2 Shared, simultaneous online editing of Microsoft Office documents

With BOKUdrive you have the possibility to edit Microsoft Office documents online together with other BOKUdrive users.

Microsoft Word, Excel and PowerPoint documents are supported. OpenDocument formats are only available as a preview, shared editing of OneNote notebooks is not supported.

To edit a document together online, you only have to create, upload or synchronize a supported document directly in BOKUdrive in an unencrypted library and open the respective editor by clicking on the document.

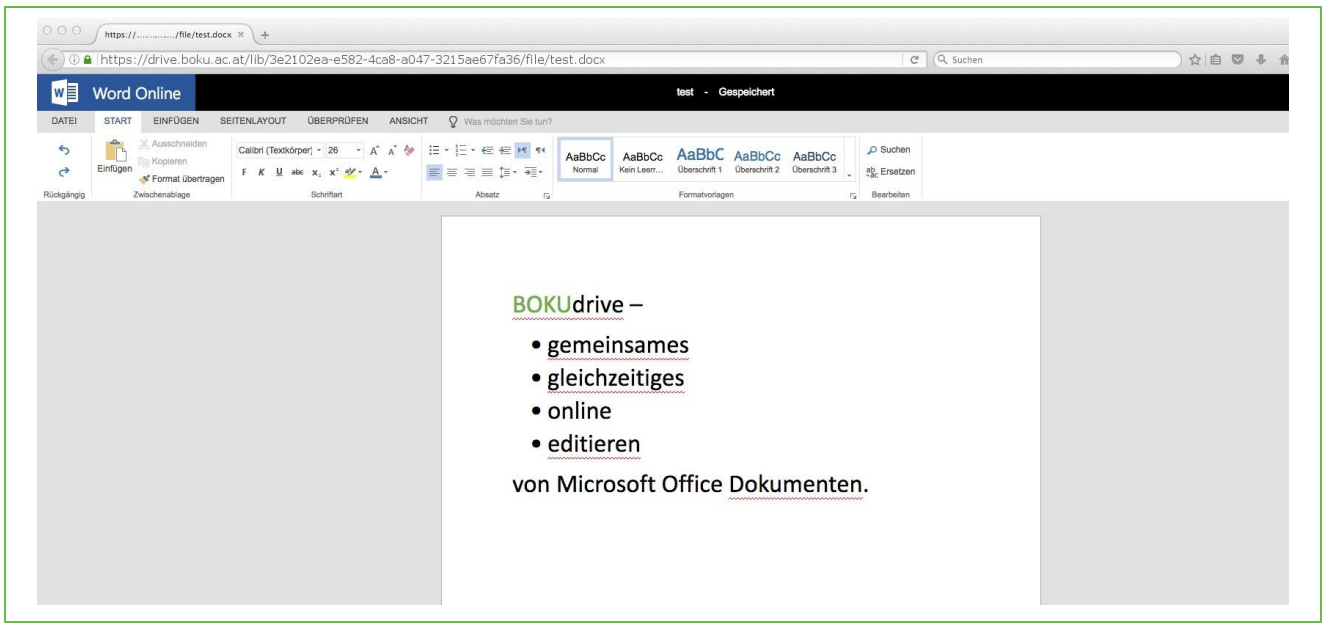


Figure 19Microsoft Word document in online view

You can see where other users are working on the document simultaneously.

The document is automatically saved in BOKUdrive during the editing process, so there is no need for a "Save" function in that sense.

The functional range of Microsoft Word, Excel, PowerPoint Online is limited compared to the installed versions.

After some time of inactivity, the session is automatically terminated, you may have to reopen the file. Data will not be lost, because the file is saved automatically.

8.3 Inviting external contributors

If you are not satisfied with the upload and download links described in section 3.1 when working with external contributors, releases can also be made to external contributors by "inviting" them with your external e-mail address. With this invitation, a BOKUdrive account can be registered automatically. After that, nothing stands in the way of a collaboration with external contributors.

To invite external contributors, select "Invite users" from the left sidebar (step 1) and then the button "Invite users" (step 2)

Figure 20Invite users

In the following dialog you enter the e-mail address(es) of the external contributors and close the dialog with "Save":

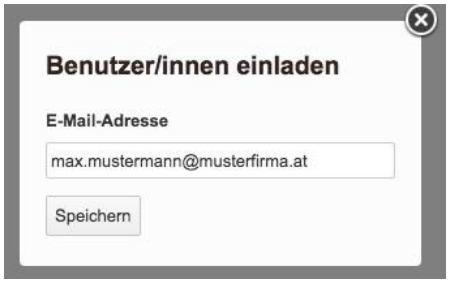


Illustration 21Invite Users - Dialog

Now an invitation will be sent out which allows an automatic registration of a BOKUdrive account. You can check the status of your invitations at any time under "Invite users" or withdraw them by selecting the entry and deleting it by selecting the trashcan icon.

After the invitation has been accepted, releases etc. can be given.

History

Last change: 15. März 2021

The **current version of** this documentation can be found on the BOKU-IT service pages at
https://short.boku.ac.at/it-bokudrive-en

Document		**BOKUdrive – Sync and Share Online Storage**	**BOKUdrive_EN_V.1.1.6_2020-10-22.docx**
Source document		BOKU	---
Update date / Author	**Version**	**Changes**	
2017-10-18 (RW,FFE/BOKU-IT)	1.0.0	Docu created	
2017-12-01 (FFE/BOKU-IT/)	1.0.1	Account manager authorization	
2017-12-04 (FFE/BOKU-IT)	1.0.2	Limits updated	
2017-12-13 (RW/BOKU-IT)	1.0.3	Screenshots of Installation Desktop Syncing Client, Upload/Download Link, Release	
2018-01-23 (RW/BOKU-IT)	1.0.4	Additional notes on sharing and links for encrypted libraries	
2018-01-26 (FFE/BOKU-IT)	1.0.5	Added details about the UseCase "Synchronizing Your GroupWise Archive	
2018-04-25 (FFE/BOKU-IT)	1.0.6	Added details about the UseCase "Synchronizing Your GroupWise Archive	
2018-05-15 (FFE/BOKU-IT)	1.1.0	Simultaneous online editing of Microsoft Office documents	
2018-06-14 (RW/BOKU-IT)	1.1.1	Activation by EDVV no longer necessary	
2018-09-24 (FFE/BOKU-IT)	1.1.2	Target group expanded, external contributors, layout	
2018-10-15 (RW/BOKU-IT)	1.1.3	Indicates that encryption of locally synchronized data may be necessary.	
2020-01-10 (FFE/BOKU-IT)	1.1.4	BOKU-IT designation	
2020-10-22 (RW/BOKU_IT)	1.1.5	Links to Seafile-Documentation updated	
2020-10-22 (RW/BOKU_IT)	1.1.6	Small corrections; boku-it@boku.ac.at	
2021-03-15 (RW/BOKU_IT)	1.1.7	Small corrections; Links to Seafile User Manual https://help.seafile.com/ adapted	