How to access the BCP BioSupraMol file system from a device?

Preamble. *Measurement data of multi-user devices are stored on a special file system drive called BCB-storage.*[1] *Here, the data are usually stored in directories that are named for the corresponding measuring devices and for the working groups. In this way, the users have direct data access. Additionally, raw data are backed up in conformity with the DFG guidelines.*

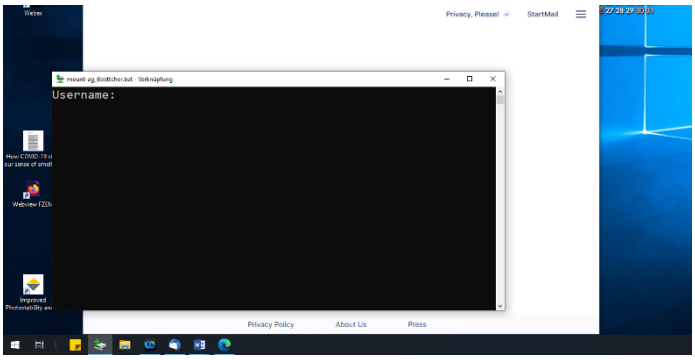
To get principal access to the BCPFS you must be registered at the "MI portal" at https://portal.mi.fu-berlin.de/. Additionally, you must have access to the respective device folder(s). There is a specialised handout on the admission to BCPFS for more information.

In the following, we describe how you can store your measurement data on the BCPFS.

Scripted mapping on devices (windows)

An icon on each device control host allows scripted mounting of the device specific Windows share. Ask the provider admin about device-specific details.

If you use scripted mapping, i.e. (double) click the respective icon, the windows console will open.



- You will be asked to type in your username (= your Zedat email without @zedat.fu-berlin.de).
  Press *Enter*
- Second, you will be asked to type in your password (=Zedat password).
  Press *Enter*

The mounting procedure starts and it may take a short time before the successful mount will be prompted. Use the anykey to close the console again.

IMPORTANT: Unmount the Windows share before you leave the device using the unmount icon, ideally log off.

If you encounter problems while trying to unmount the Windows share, read the last section.

[1] Please note that the storage is currently still free of charge, but may be charged in the future.

How to store measurement data?

On the device-specific Windows shares, you must choose your group folder to store the data. This device-specific share is also available through the Windows share of your lab.

Please read the handout on data storage conventions mandatory for placement and naming of data.

How to fix mount problems?

It is a known issue that some Windows applications hold open file handles although they appear to have closed all files. The unmount scripts in bcpwinmount contain a check that refuses to unmount if there are open file handles. If you always follow a strategy that avoids such hidden file handles, mount problems should never appear. Possible approaches:

- Always logoff when switching the user who mounts the microscope folder.
- Always close applications that may hold open file handles to BCPFS before unmounting.

If you experience mount problems, there are several things you can try. However, *please always contact the device admins before trying to fix mount problems on your own.*

If you suspect that the mount problem is due to open file handles, ask the user who had mounted BCPFS before to unmount again. Then close applications that may hold open file handles. Unmount and retry to mount as the desired user.

To identify applications that hold open file handles, use handle.exe, to list open file handles.
(Handle.exe is available from https://live.sysinternals.com and is included in bcpwinmount.)

- handle.exe bcp-storage01.imp.fu-berlin.de

Now you can close the applications that hold the file handles.

In rare situations, it may be useful to forcefully close handles using handle.exe -c <handle> -p <pid> as an administrator. But be aware that this may cause data corruption if the application that holds the handle uses the old handle later;
see https://technet.microsoft.com/en-us/library/2009.04.windowsconfidential.aspx for a discussion.

A safe alternative is to logoff and logon again to clear the session cache. This approach worked in all cases but might not be applicable because logoff is restricted on the microscope due to other constraints.

The following command, executed in a Window Command Prompt (cmd.exe), drops all connections:

- net use * /del

Although this may help to resolve network problems in general, it is unclear in which specific situations it would be useful.