

# Mounting the storage system at the beamline

Only computers which have their IP address registered for the beamline will be able to mount the beamline file-system.

The IP address should be register with FS-EC. This is especially important for Pool Detectors.

## Share Creation on Windows

The ASAP3 storage system should be mapped to T and U. For these drives the virus scanner has been turned off via policy settings to prevent it from scanning the whole file-system.

### Share for the storage system

- right-click on "Computer"
- click on "Map network drive"
- choose drive T:
- choose folder \\<Beamline specific SMB Server>\<Beamline> e.g for P10: \\asap3-p10.desy.de\p10

#### Note for Windows 10

- In order to mount the storage system from a DESY Windows 10 host, you have to use a valid DESY account
  - Usually this is <Beamline>user, e.g. p10user at beamline P10
- Mounting the storage with the guest account is longer possible with a DESY Windows 10 installation, as the account is disabled by default.
- For non-DESY Windows 10 installations, mounting with guest permissions might work
  - Otherwise, contact local staff in order to mount the share with a valid DESY account

#### Note for Windows 7

- Windows 7 will reach end of life on 2020-01-14 and will no longer receive security updates
- Access via SMB from Windows 7 hosts is no longer supported

### Share for the common directory

- right-click on "Computer"
- click on "Map network drive"
- choose drive U:
- choose folder \\asap3-smb.desy.de\common

### Share for the documents directory

- right-click on "Computer"
- click on "Map network drive"
- choose drive V: (t.b.c, not yet registered as non-virus-scanned!)
- choose folder \\<Beamline specific SMB Server>\bldocuments-<Beamline> e.g for P10: \\asap3-p10.desy.de\bldocuments-p10 Note that beamline names with a dot (.) are mapped to server names with a dash(-), e.g. p21.1 asap3-p21-1.desy.de
- The documents directory has snapshots, which can be accessed in windows explorer via right-click restore previous versions.

### Export Servers: PETRA III

Beamline	SMB Server
P01	\\asap3-p01.desy.de\p01
P02.1	\\asap3-p02-1.desy.de\p02.1
P02.2	\\asap3-p02-2.desy.de\p02.2
P03	\\asap3-p03.desy.de\p03
P04	\\asap3-p04.desy.de\p04
P05	\\asap3-p05.desy.de\p05
P06	\\asap3-p06.desy.de\p06
P07	\\asap3-p07.desy.de\p07
P07B	\\asap3-p07b.desy.de\p07b
P08	\\asap3-p08.desy.de\p08
P09	\\asap3-p09.desy.de\p09
P10	\\asap3-p10.desy.de\p10
P11	\\asap3-p11.desy.de\p11

### Export Server: FLASH

Beamline	SMB Server
BL1	\\asap3-bl1.desy.de\bl1
BL2	\\asap3-bl2.desy.de\bl2
BL3	\\asap3-bl3.desy.de\bl3
PG1	\\asap3-pg1.desy.de\pg1
PG2	\\asap3-pg2.desy.de\pg2
THZ	\\asap3-thz.desy.de\thz
FL21	\\asap3-fl21.desy.de\fl21
FL22	\\asap3-fl22.desy.de\fl22
FL23	\\asap3-fl23.desy.de\fl23
FL24	\\asap3-fl24.desy.de\fl24
FL25	\\asap3-fl25.desy.de\fl25
FL26	\\asap3-fl26.desy.de\fl26

### PETRA III Extension

Beamline	SMB Server
P21.1	\\asap3-p21-1.desy.de\p21.1
P21.2	\\asap3-p21-2.desy.de\p21.2
P61	\\asap3-p61.desy.de\p61
P62	\\asap3-p62.desy.de\p62
P64	\\asap3-p64.desy.de\p64
P65	\\asap3-p65.desy.de\p65

## Export Servers: Special Instruments

Beamline	SMB Server
lvp	\\asap3-lvp.desy.de\lvp
pipe	\\asap3-pipe.desy.de\pipe
nanotom	\\asap3-nanotom.desy.de\nanotom
demonstrator	\\asap3-demonstrator.desy.de\demonstrator
slm	\\asap3-lsm.desy.de\slm

## Export Servers: Research Groups

Beamline	SMB Server
camp	\\asap3-camp.desy.de\camp
thz.endstation	\\asap3-thz-endstation.desy.de\thz.endstation
agipd2.char	\\asap3-agipd2-char.desy.de\agipd2.char
agipd2.zdev	\\asap3-agipd2-zdev.desy.de\agipd2.zdev
percival.sys.1	\\asap3-percival-sys-1.desy.de\percival.sys.1

## Mounting on Linux

If the IP address was provided to FS-EC the mount points will have been set in fstab. You will then find the beamline file-system under /gpfs and the common directory under /common.

If the IP address was provided but the file-system is not there, it can be mounted as described below.

### Mounting the storage system

For NFS mounts on Linux, please use the following mount options:

#### NFSv3 Mount Options

```
mount -o nfsvers=3,rsize=65536,
wsz=65536,hard <Beamline
specific NFSv3 Server:Path>
```

**e.g. p10 wants to mount gpfs under /gpfs:**

```
mount -o nfsvers=3,
rsize=65536,wsz=65536,hard
asap3-p10.desy.de:/beamline
/p10 /gpfs
```

*Note:* for mounts on MAC OS, you typically / most likely have to add the option 'resvport' as well.

### Mounting the common directory

A directory common to all beamlines is available for providing read-only access to scripts, documentation, calibration files, etc ...

For NFS mounts on Linux, please use the following mount options:

#### NFSv3 Mount Options

```
mount -o nfsvers=3,rsize=65536,
wsz=65536,hard asap3-nfs.
desy.de:/asap3/<facility>/gpfs
/common /common
```

### Export Servers: PETRA III

Beamline	NFSv3 Server:Path
P01	asap3-p01.desy.de:/beamline/p01
P02.1	asap3-p02-1.desy.de:/beamline/p02.1
P02.2	asap3-p02-2.desy.de:/beamline/p02.2
P03	asap3-p03.desy.de:/beamline/p03
P04	asap3-p04.desy.de:/beamline/p04
P05	asap3-p05.desy.de:/beamline/p05
P06	asap3-p06.desy.de:/beamline/p06
P07	asap3-p07.desy.de:/beamline/p07
P07B	asap3-p07b.desy.de:/beamline/p07b
P08	asap3-p08.desy.de:/beamline/p08
P09	asap3-p09.desy.de:/beamline/p09
P10	asap3-p10.desy.de:/beamline/p10
P11	asap3-p11.desy.de:/beamline/p11

### PETRA III Extension

Beamline	NFSv3 Server:Path
P21.1	asap3-p21-1.desy.de:/beamline/p21.1
P21.2	asap3-p21-2.desy.de:/beamline/p21.2

### Export Servers: FLASH

Beamline	NFSv3 Server:Path
BL1	asap3-bl1.desy.de:/beamline/bl1
BL2	asap3-bl2.desy.de:/beamline/bl2
BL3	asap3-bl3.desy.de:/beamline/bl3
PG1	asap3-pg1.desy.de:/beamline/pg1
PG2	asap3-pg2.desy.de:/beamline/pg2
THZ	asap3-thz.desy.de:/beamline/thz
FL21	asap3-fl21.desy.de:/beamline/fl21
FL22	asap3-fl22.desy.de:/beamline/fl22
FL23	asap3-fl23.desy.de:/beamline/fl23
FL24	asap3-fl24.desy.de:/beamline/fl24
FL25	asap3-fl25.desy.de:/beamline/fl25
FL26	asap3-fl26.desy.de:/beamline/fl26

## Mounting the documents directory

The documents directories are mounted like the storage system, except that

in the paths given in the table on the right one has to replace **beamline** with **bldocuments**.

These directories are beamline-specific and provide snapshots.

To access the snapshots in every (sub) directory there is a hidden .snapshots directory, (hidden means: it does not show up even via ls -a) which can be accessed using the name (eg. ls /bl\_documents /mystuff/.snapshots will show you the snapshots of your mystuff directory, with an obvious syntax like @GMT-2017.05.10-22.30.01)

P61	asap3-p61.desy.de: /beamline/p61
P62	asap3-p62.desy.de: /beamline/p62
P64	asap3-p64.desy.de: /beamline/p64
P65	asap3-p65.desy.de: /beamline/p65



```
mount -o nfsvers=3,rsize=65536,  
wsize=65536,hard asap3-p10.  
desy.de:/bldocuments/p10  
/bl_documents
```

## Export Servers: Special Instruments

Beamline	NFSv3 Server:Path
lvp	asap3-lvp.desy.de: /beamline/lvp
demonstrator	asap3-demonstrator.desy.de: /beamline/demonstrator
nanotom	asap3-nanotom.desy.de: /beamline/nanotom
pipe	asap3-pipe.desy.de: /beamline/pipe
slm	asap3-slm.desy.de: /beamline/slm

## Export Servers: Research Groups

Beamline	NFSv3 Server:Path
camp	asap3-camp.desy.de: /beamline/camp
thz.endstation	asap3-thz-endstation.desy.de: /beamline/thz.endstation
agipd2.char	asap3-agipd2-char.desy.de: /beamline/agipd2.char
agipd2.zdev	asap3-agipd2-zdev.desy.de: /beamline/agipd2.zdev
percival.sys.1	asap3-percival-sys-1.desy.de: /beamline/percival.sys.1

## Allowed Hosts for Beamline Filesystem

The allowed hosts to access the beamline filesystem are stored in LDAP. If you are unsure, if your PC has access to the beamline filesystem, the DESY LDAP server can be queried.

If the host is not in the list, please get in touch with FS-EC to register the host.

## Query from Linux

In order to query the DESY LDAP server, access to the DESY network and the command line tool "*ldapsearch*" is required:

```
ldapsearch -x -H ldap://it-ldap-slave.desy.de:1389 -b ou=rgy,o=DESY,c=DE -LLL cn=a3<beamline>-hosts
```

Substitute *<beamline>* with the lower-case name of your beamline, e.g. BL1 bl1, P11 p11  
The output will contain a *nisNetGroupTriple*, for each configured host for the beamline filesystem.



### Idapsearch Example

```
$ ldapsearch -x -H ldap://it-ldap-slave.desy.de:1389 cn=a3bl1-hosts -LLL  
dn: cn=a3bl1-hosts,ou=netgroup,ou=rgy,o=desy,c=de  
objectClass: top  
objectClass: nisNetgroup  
description: Netgroup for nodes on FLASH Beamline BL1  
cn: a3bl1-hosts  
nisNetgroupTriple: (zitasap3.desy.de,-,)  
<Output reduced>
```