

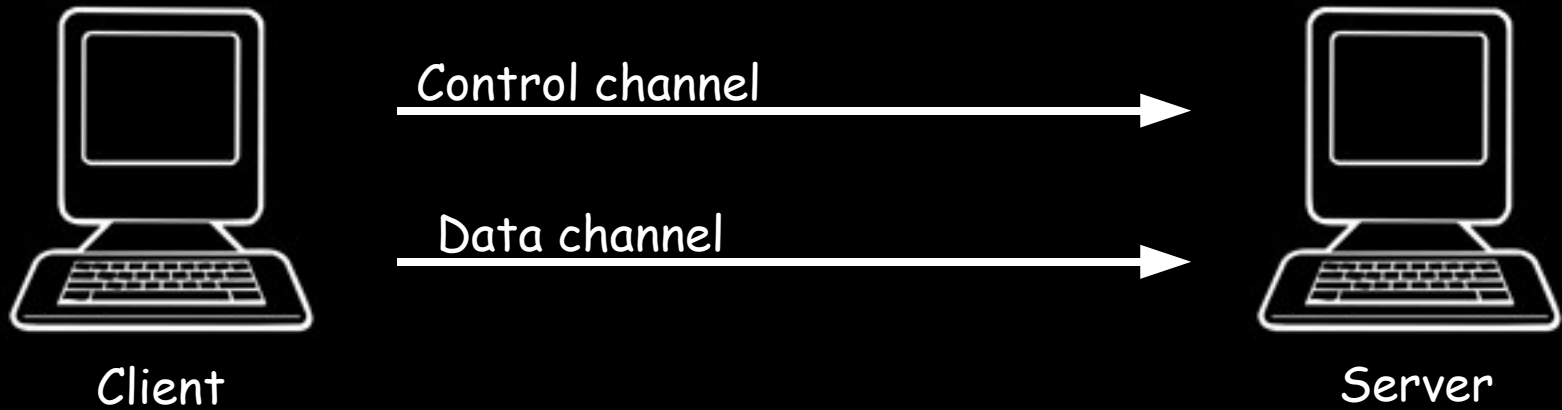
GridFTP 2 in dCache 1.8

or

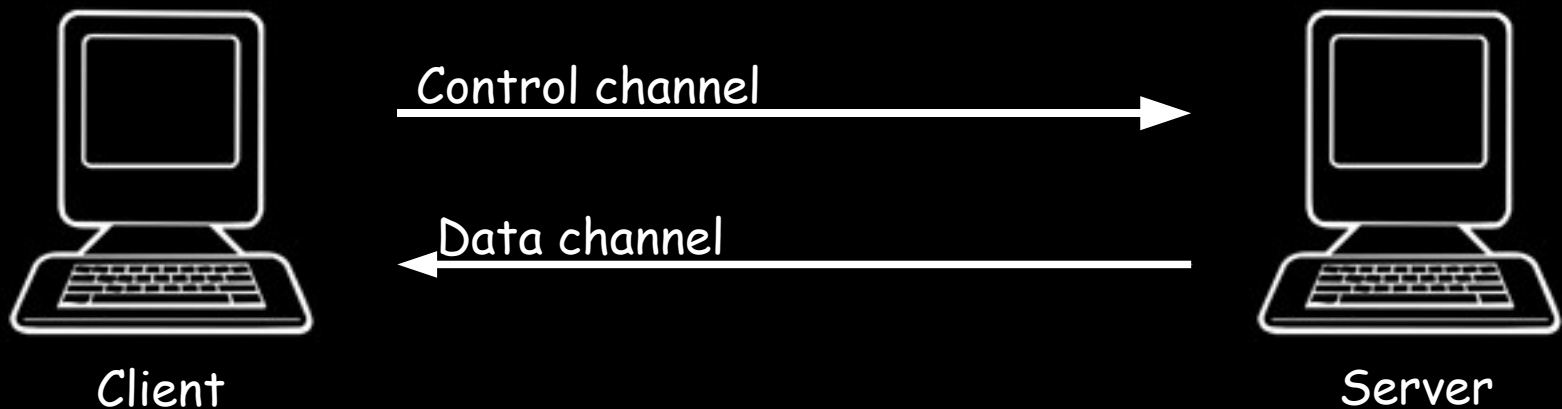
How to half the traffic on your  
network

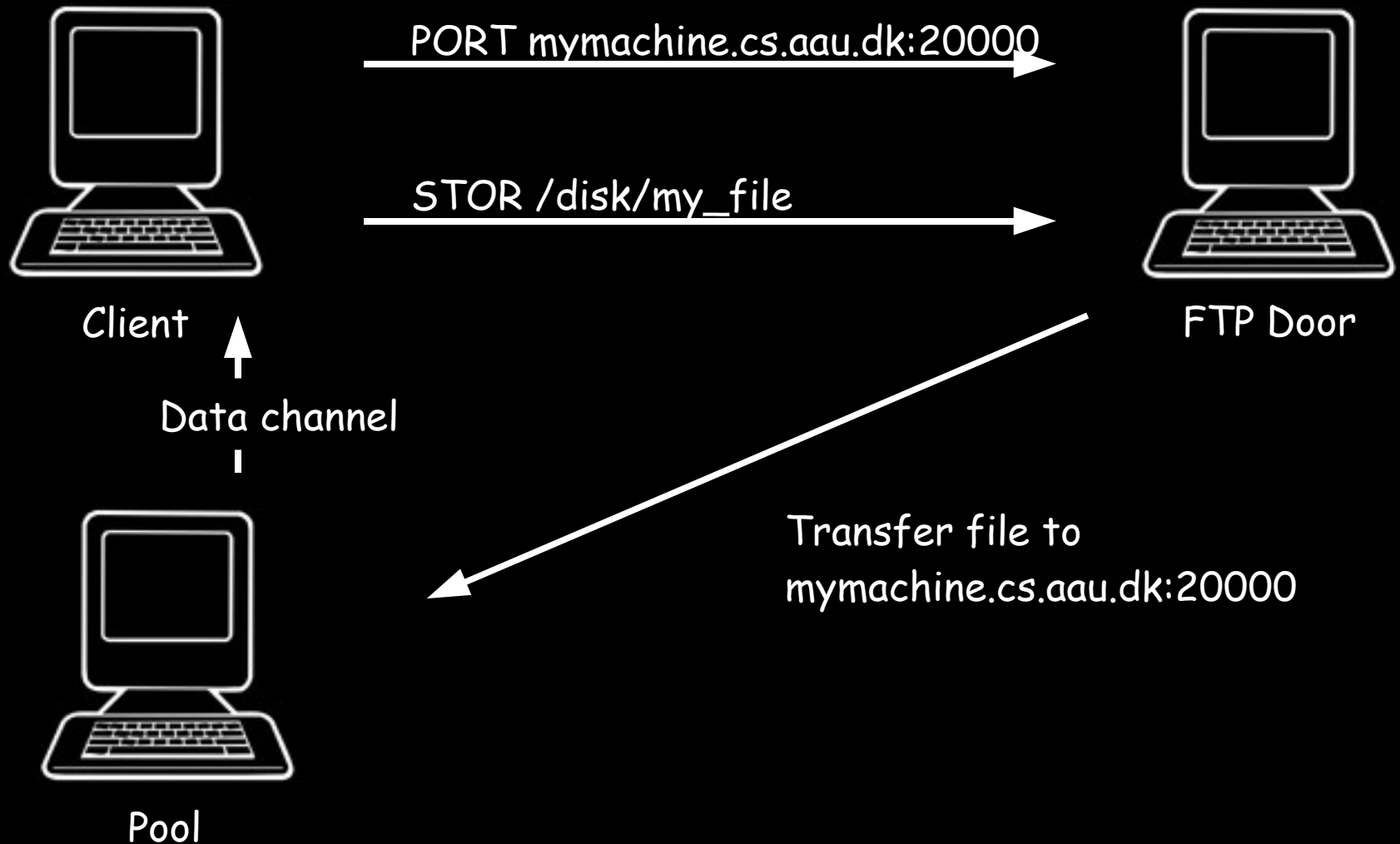
Gerd Behrmann

## Passive servers



## Active servers







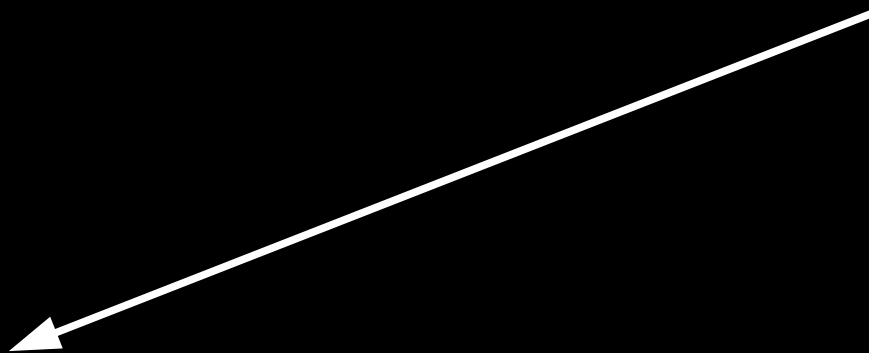
Pool



Client



FTP Door



Pool

## Active file retrieval in Stream mode:

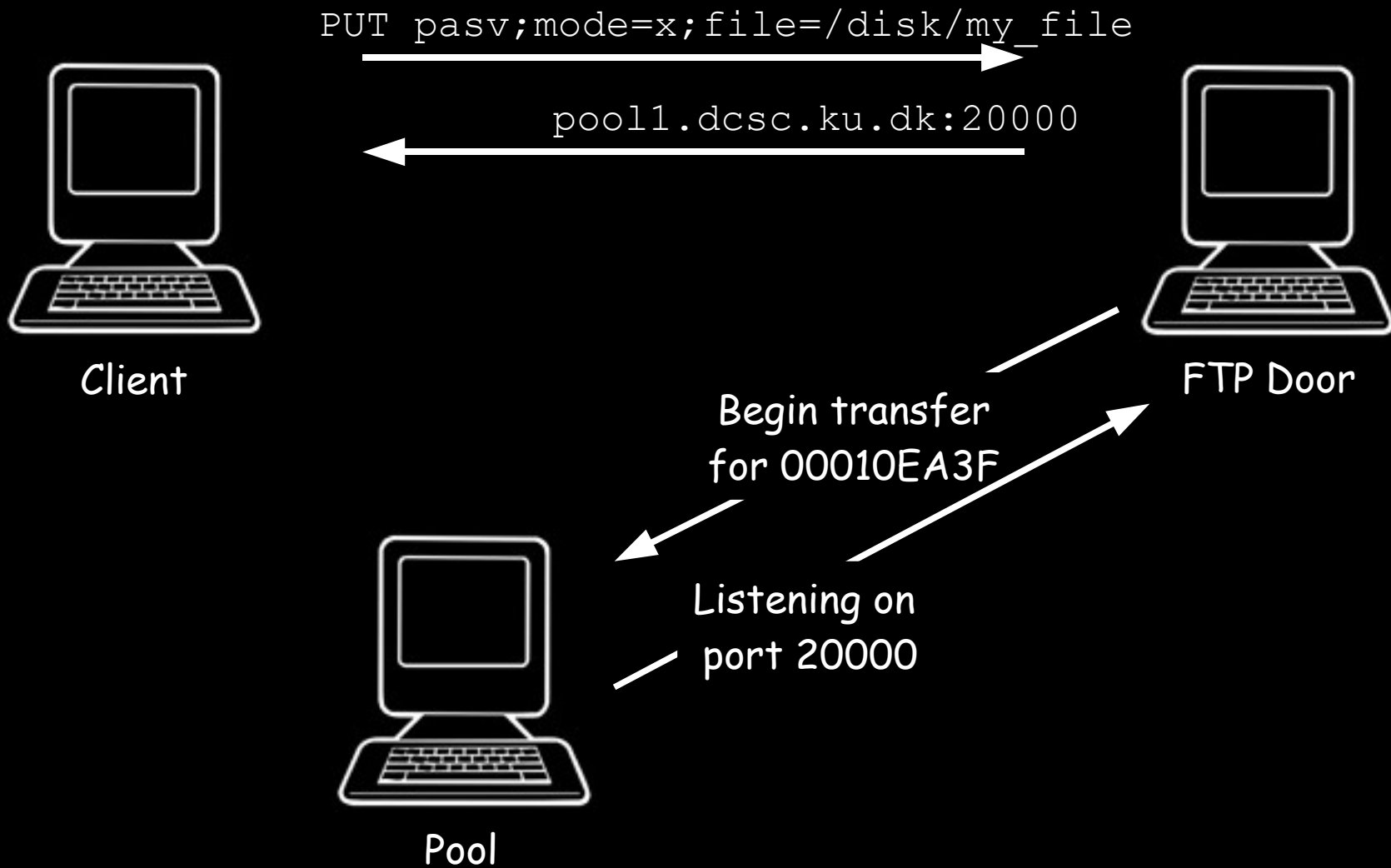
<u>Client</u>	<u>Server</u>
GET path=/tmp/file.dat;port=34,23,45,12,48,14;mode=s;	
	1xx Data connection established
	2xx Transfer complete

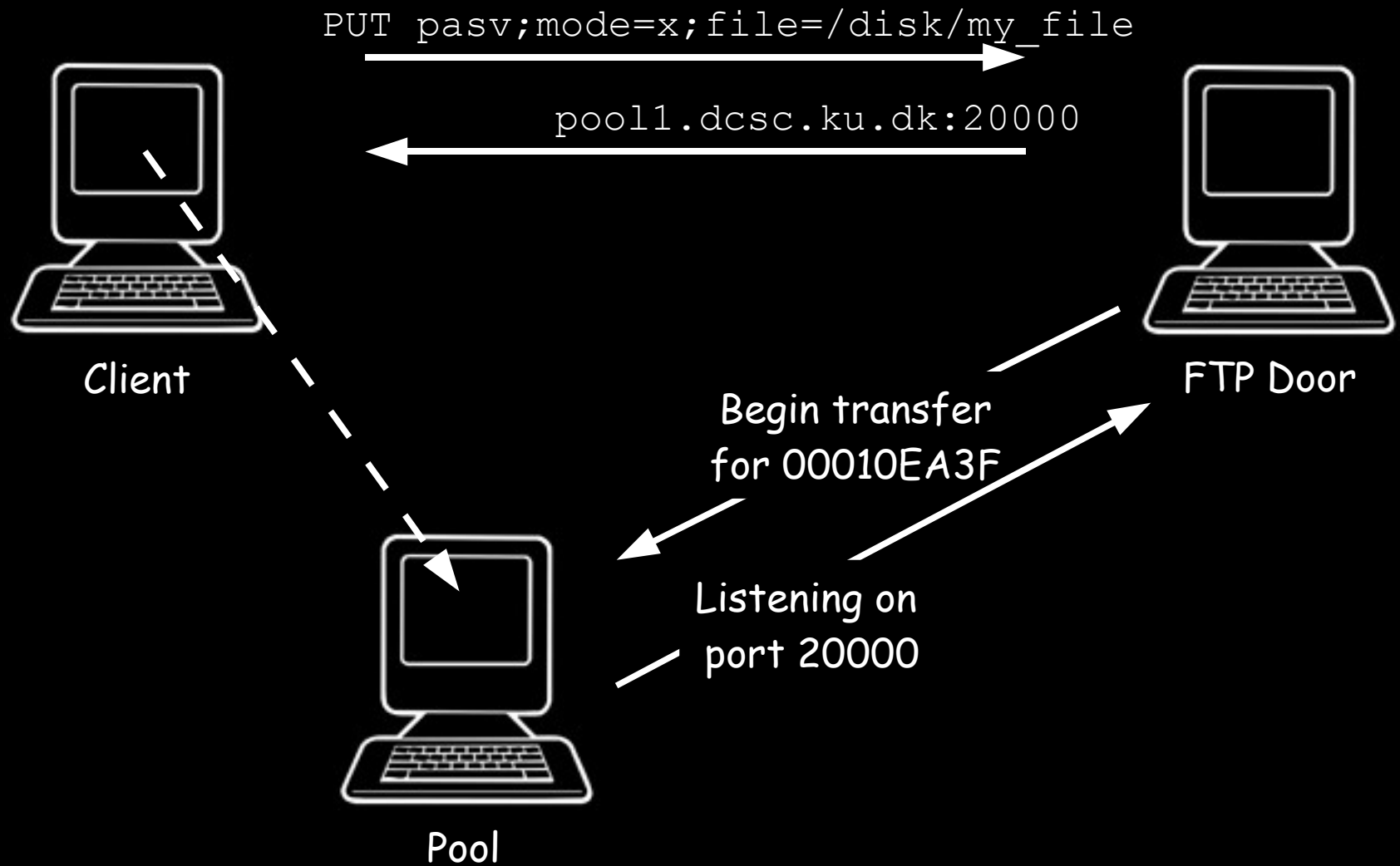
## Passive file retrieval in E mode:

<u>Client</u>	<u>Server</u>
GET path=/tmp/file.dat;pasv;mode=e;	
	1xx wait
	1xx wait
	1xx PORT=134,23,145,2,48,114
	1xx Data connection established
	2xx Transfer complete

## Passive file upload in X mode with MD5 signature calculation:

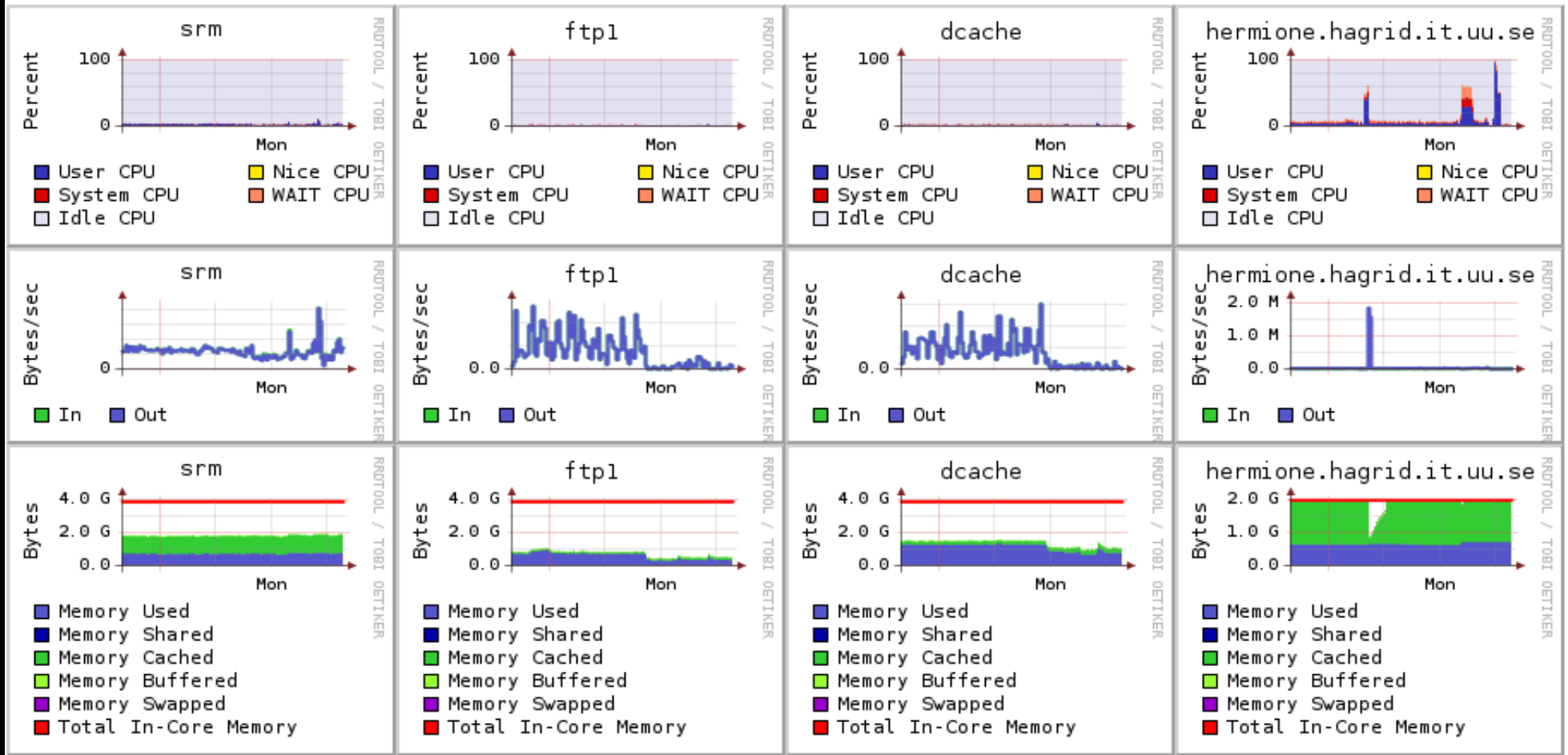
<u>Client</u>	<u>Server</u>
PUT path=/tmp/file.dat;pasv;mode=x;chksum=md5;	
	1xx wait
	1xx wait
	1xx PORT=134,23,145,2,48,114
	1xx Data connection established
	2xx Transfer complete







NDGF core services



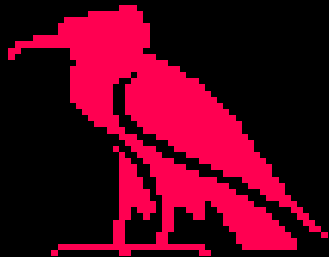
## config/dCacheSetup

```
# ---- May pools accept incoming connection for GridFTP transfers?
# Values: 'true', 'false'
# Default: 'false' for FTP doors, 'true' for pools
#
# If set to true, pools are allowed accept incoming connections for
# for FTP transfers. This only affects passive transfers. Only passive
# transfers using GFD.47 GETPUT (aka GridFTP 2) can be redirected to
# the pool. Other passive transfers will be channelled through a
# proxy component at the FTP door. If set to false, all passive
# transfers to through a proxy.
#
# This setting is interpreted by both FTP doors and pools, with
# different defaults. If set to true at the door, then the setting
# at the individual pool will be used.
#
# gsiftpAllowPassivePool=false
```

REPEAT AFTER ME

GridFTP 2 a.k.a. GFD.47  
is **NOT** the  
Globus GridFTP daemon  
release 2.0

Tool	Component	Native	Features
Globus Toolkit 2.4.3	Client	As patch	GETPUT
Globus Toolkit 4.0	Client	As patch	GETPUT
Globus Toolkit 4.1	Client	Yes	GETPUT, CHKSUM
COG JGlobus 1.4	Client	As patch	GETPUT
dCache 1.8	Client and server	Yes	GETPUT, CHKSUM, MODEX
ARC 0.6.1	Client	Yes	GETPUT
FTS 2 and gLite	Client	Via GT patch	GETPUT



KnowARC



New cache repository in dCache 1.8

or

How to reduce memory consumption  
and increase startup speed

Gerd Behrmann

# Traditional layout of pool directory

```
|-- RepositoryOk
|-- control
| |-- 000100000000000000018EA20
| |-- 000100000000000000018EA48
| |-- SI-000100000000000000018EA20
| `-- SI-000100000000000000018EA48
|-- data
| |-- 000100000000000000018EA20
| `-- 000100000000000000018EA48
`-- setup
```

# Berkeley DB based cache repository

```
|-- RepositoryOk
|-- meta
| |-- 00000000.jdb
| `-- je.lck
|-- data
| |-- 0001000000000000000018EA20
| `-- 0001000000000000000018EA48
`-- setup
```

```
# ---- Which meta data repository implementation to use.
# Values: org.dcache.pool.repository.meta.file.FileMetaDataRepository
#         org.dcache.pool.repository.meta.db.BerkeleyDBMetaDataRepository
# Default: org.dcache.pool.repository.meta.file.FileMetaDataRepository
#
# Selects which meta data repository implementation to use. This is
# essentially a choice between storing meta data in a large number
# of small files in the control/ directory, or to use the embedded
# Berkeley database stored in the meta/ directory (both directories
# placed in the pool directory).
#
# metaDataRepository=org.dcache.pool.repository.meta.file.FileMetaDataRepository
#
```



```
# ---- Which meta data repository to import from.
# Values: org.dcache.pool.repository.meta.file.FileMetaDataRepository
#         org.dcache.pool.repository.meta.db.BerkeleyDBMetaDataRepository
# Default:
#
# Selects which meta data repository to import data from if the
# information is missing from the main repository. This is useful
# for converting from one repository implementation to another,
# without having to fetch all the information from the central PNFS
# manager.
#
# metaDataRepositoryImport=""
```

## Pseudo algorithm for readEntry(pnfsid)

1. if main repository contains pnfsid  
then return that entry
2. if import repository contains pnfsid  
then return that entry
3. if PNFS Manager can provide the entry  
then return that entry
4. otherwise mark the file as bad