

dCache Firewall Issue

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for dCache Team



Protocols and Ports

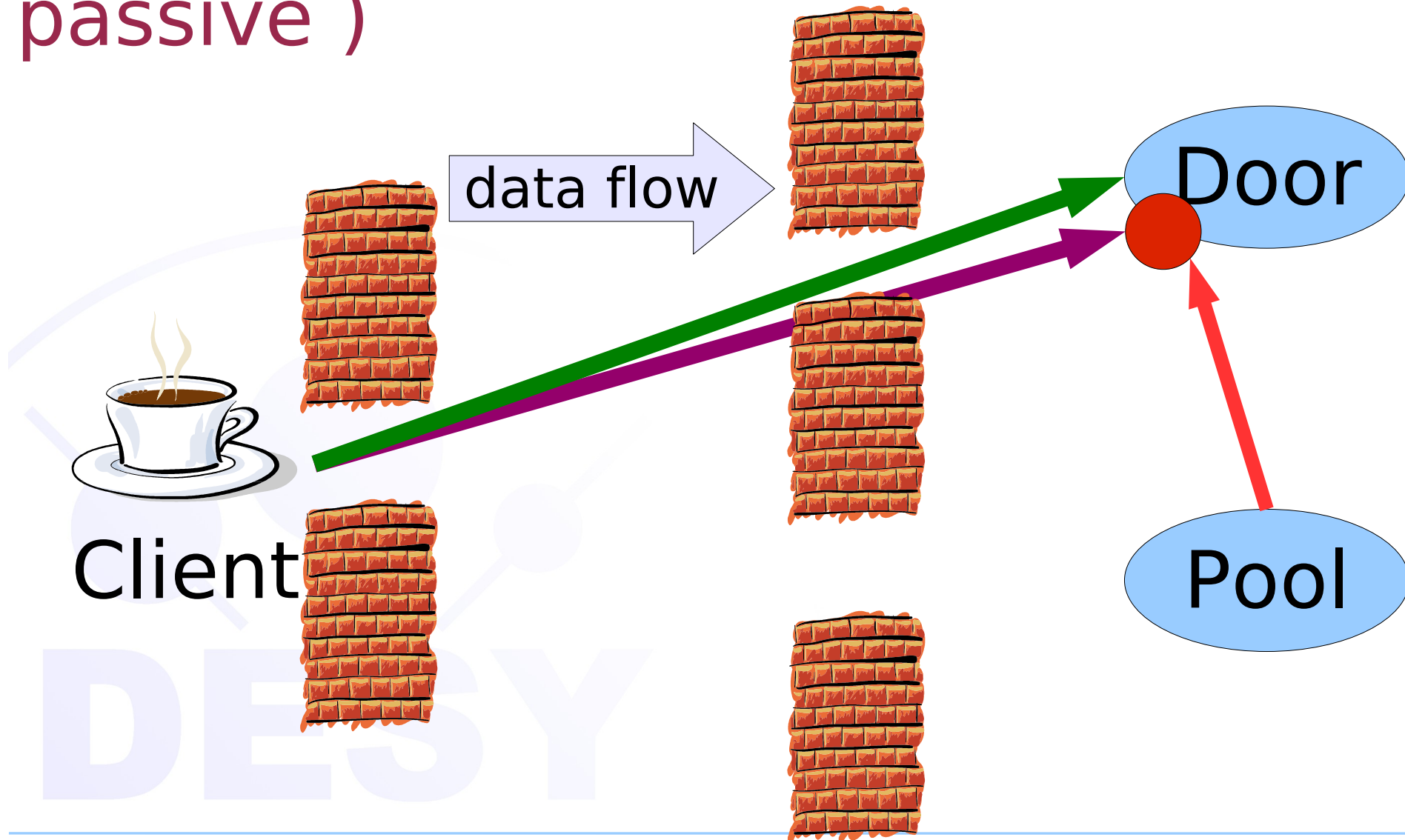
dCache.ORG

20000:25000	=> gridftp in pools
33115:33145	=> passive dcap & xrootd
8443	=> SRM
22223	=> ssh
22125	=> dcap
22128	=> gsidcap
1049	=> xrootd
2811	=> gridftp
2288	=> httpd
11111/udp	=> lm
xxxxxx	=> cells interconnect

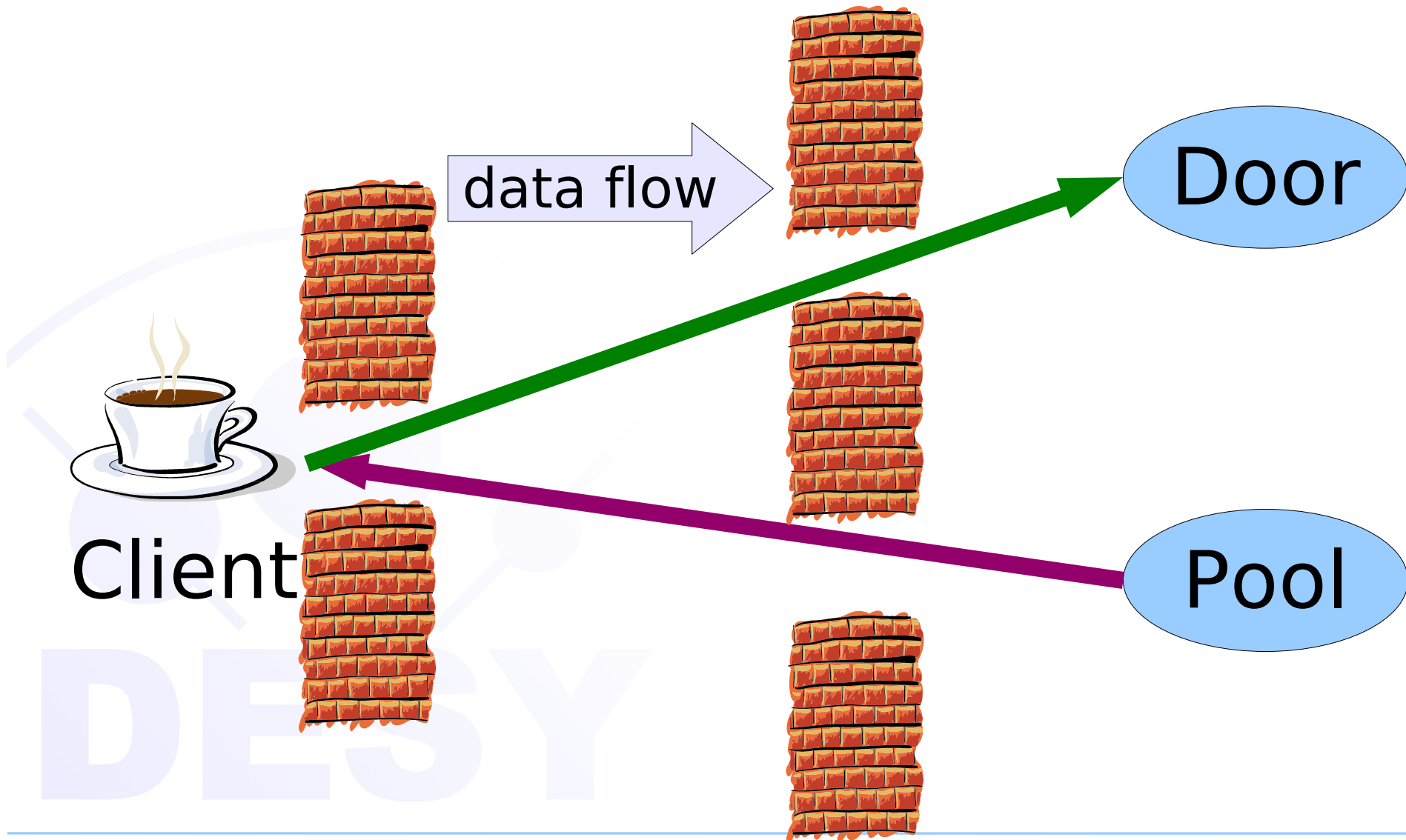
- BLOCK MODE – regular FTP
- Extended BLOCK MODE (EMODE)
 - out-of-sequence data delivery
 - block offset
 - parallel streams
 - (passive mode only)
- eXtended EMODE (XMODE)
 - removed unidirectional transfer limitation
 - added data integrity

FTP write (pool passive)

dCache.ORG

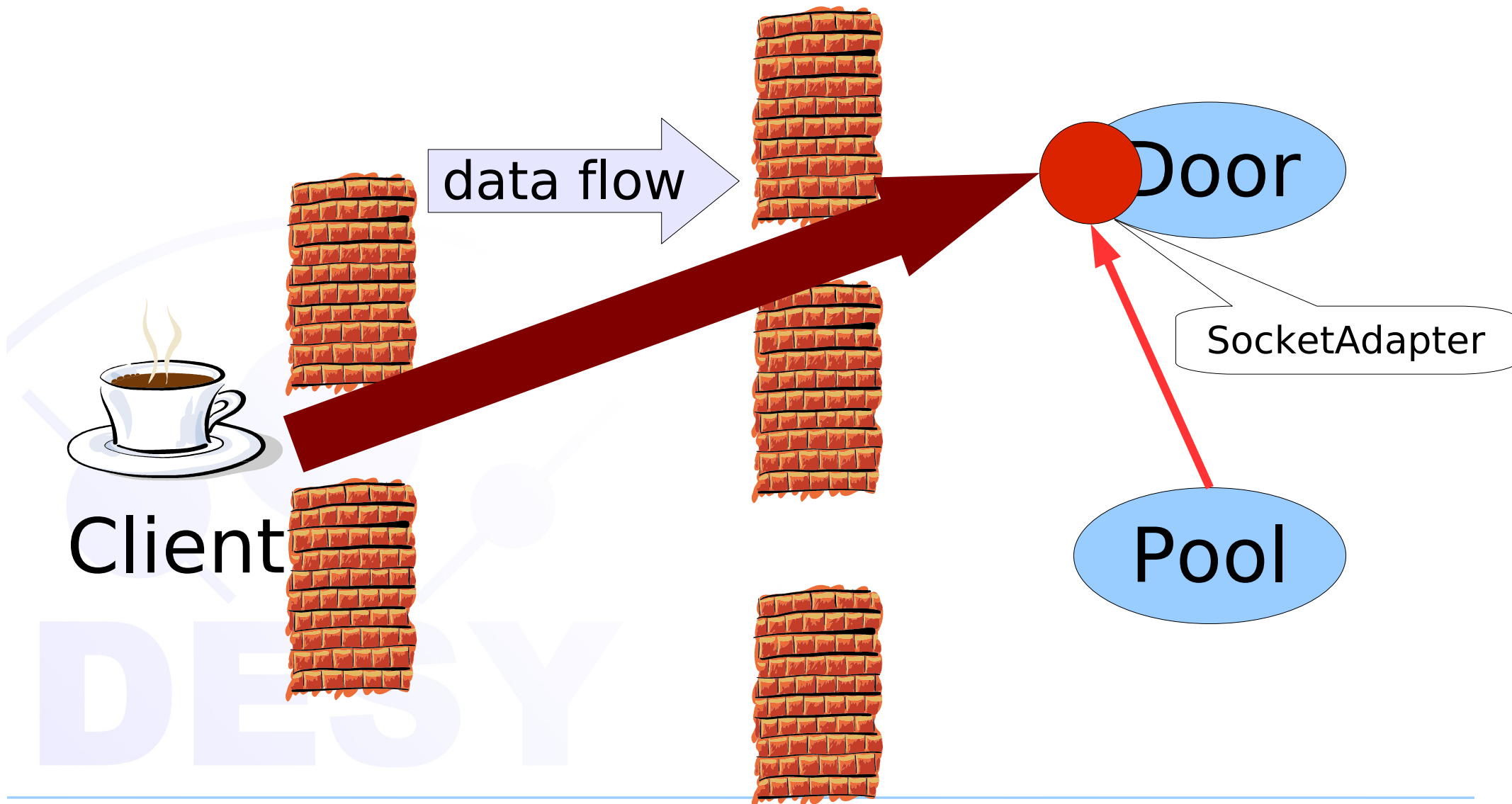


FTP write (pool active) *dCache.ORG*



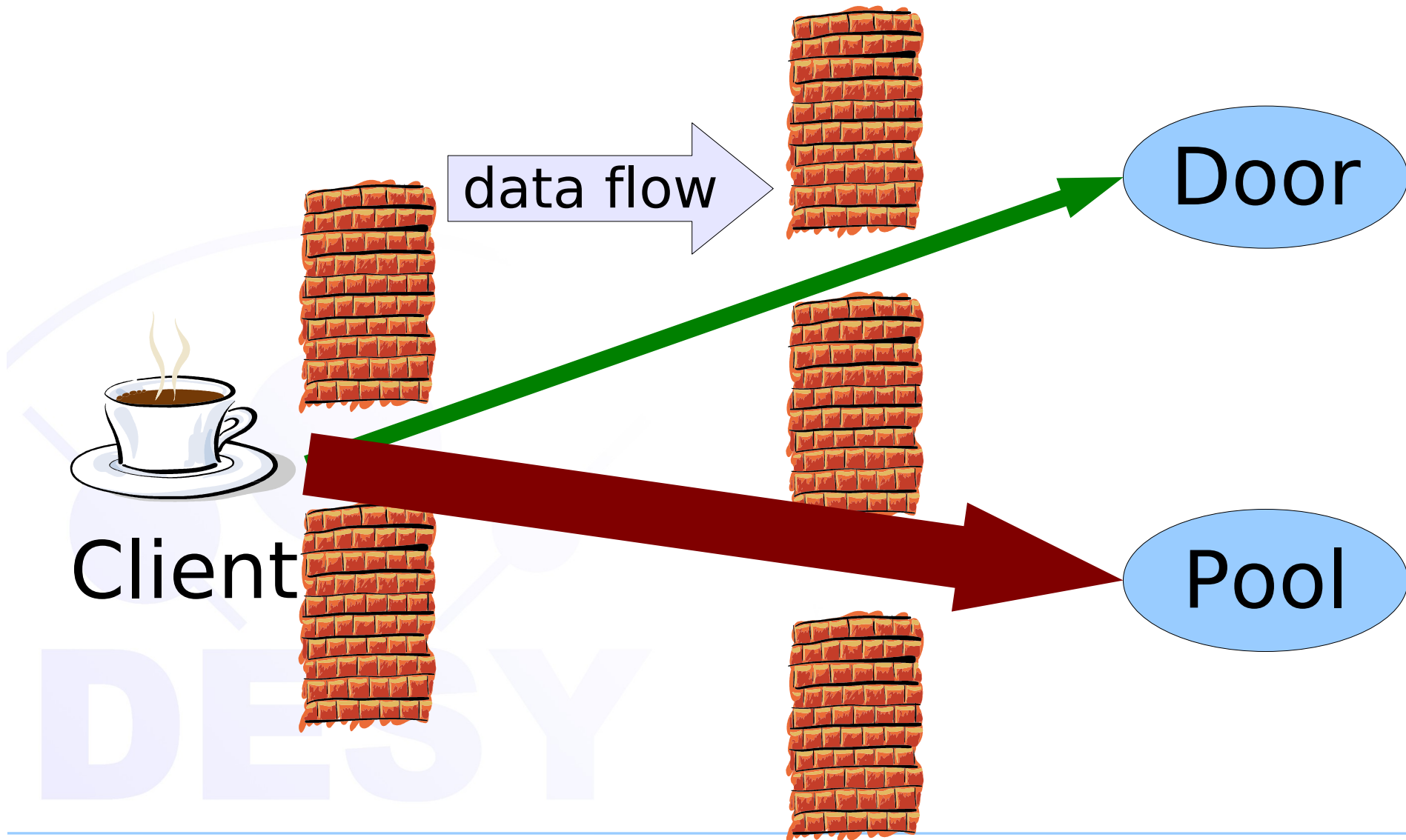
FTPv1 write (EMODE)

dCache.ORG



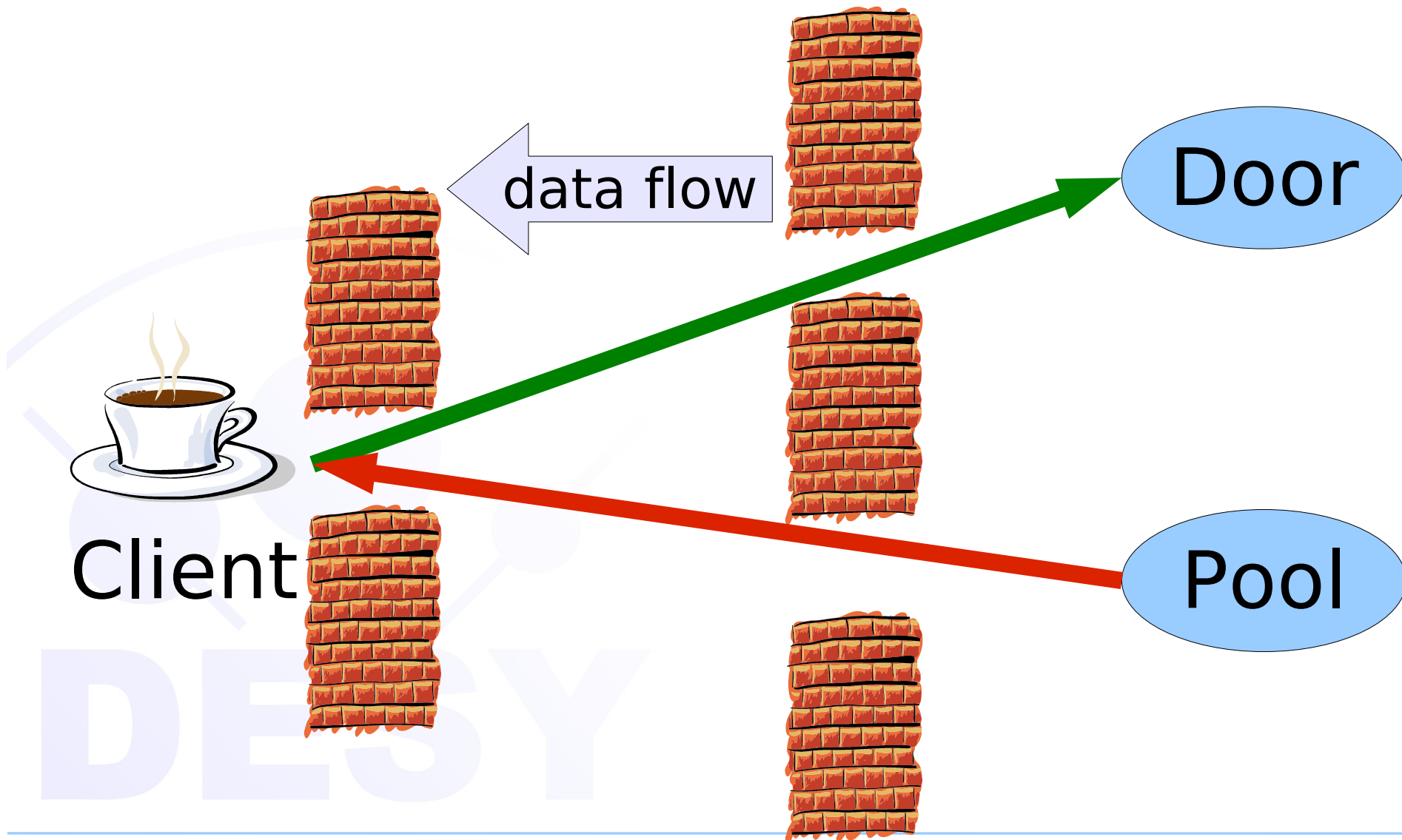
FTPv2 write (XMODE)

dCache.ORG



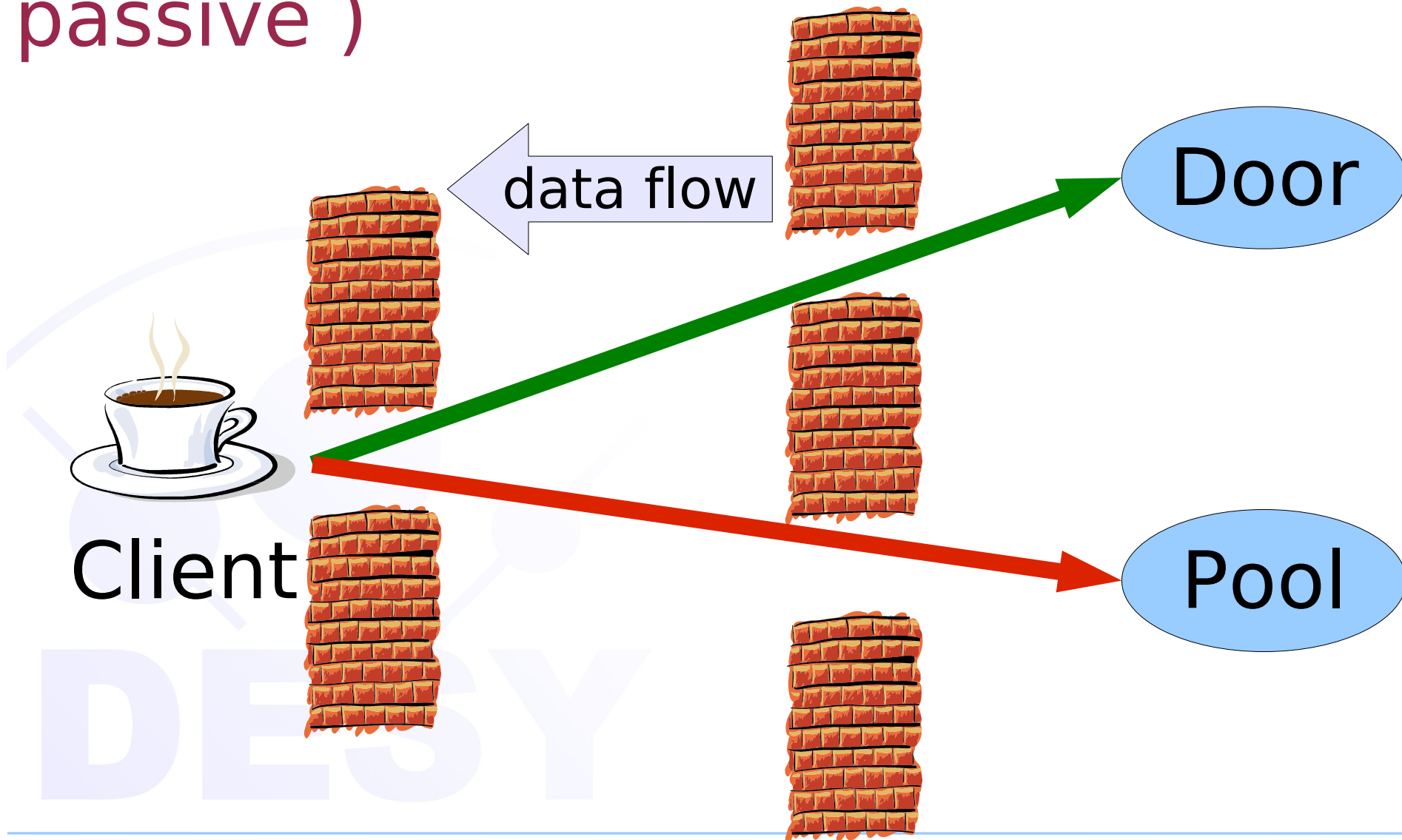
FTP read (pool active)

dCache.ORG



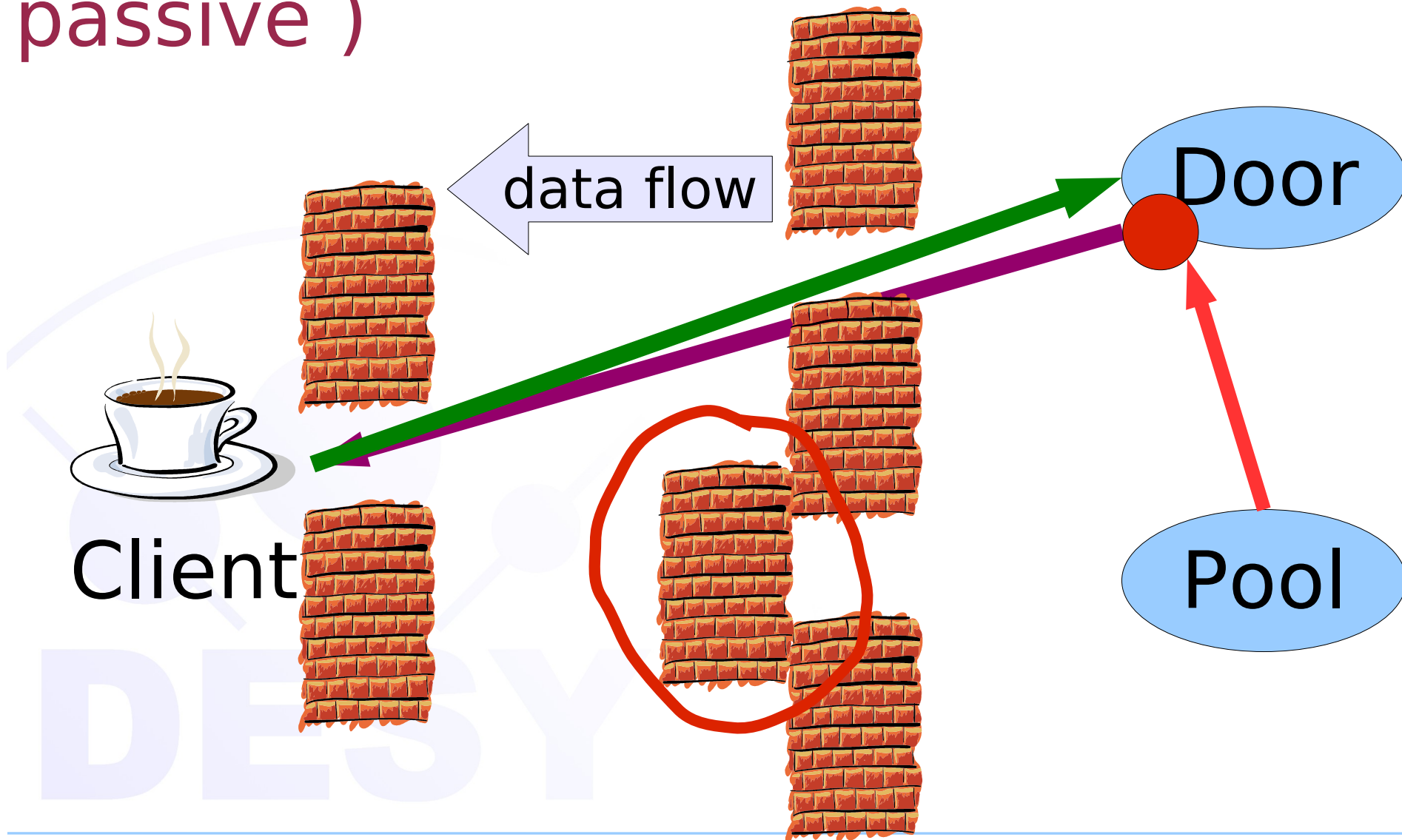
FTP read (pool passive)

dCache.ORG



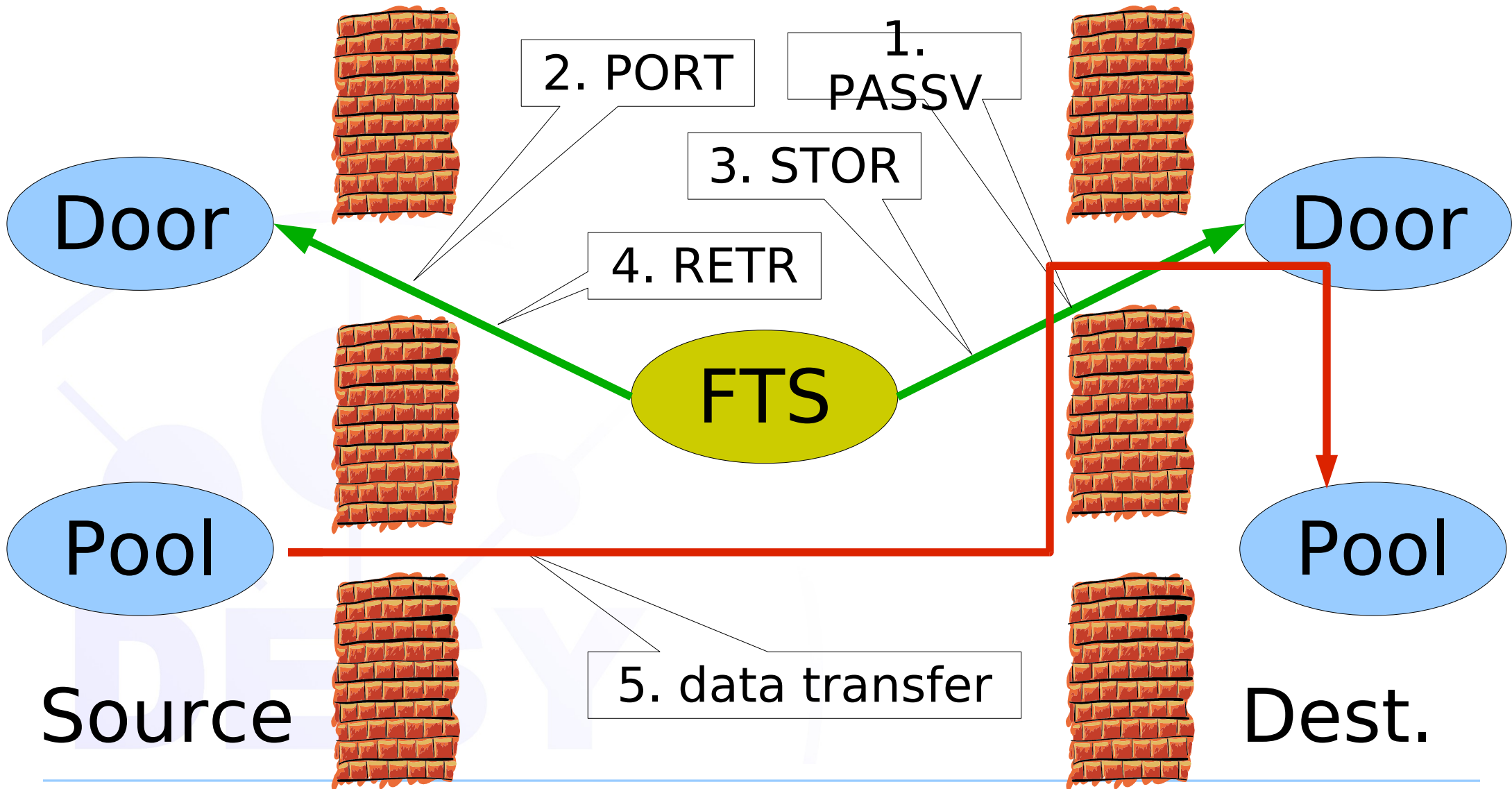
FTP read (pool passive)

dCache.ORG



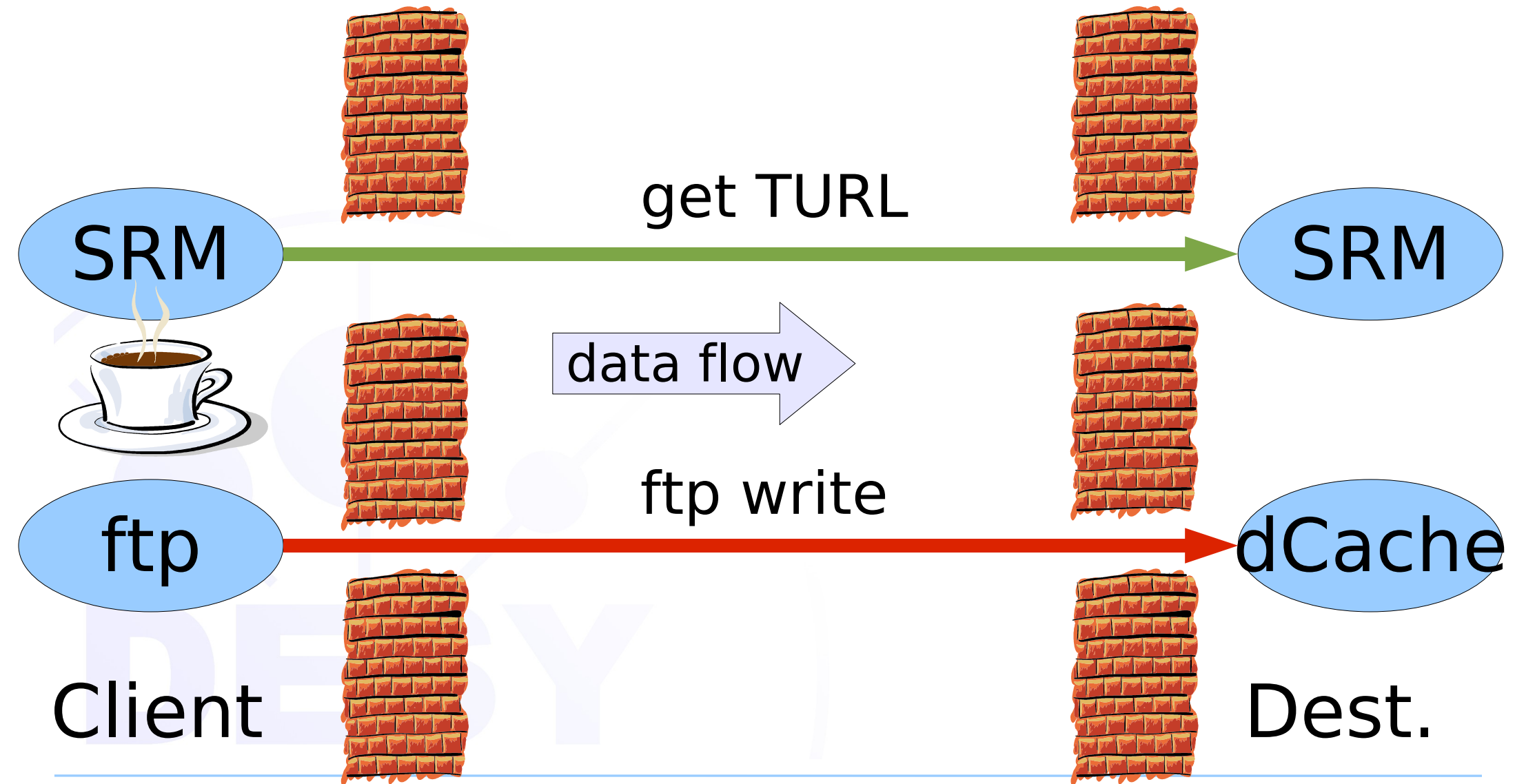
FTS(FTP) COPY

dCache.ORG



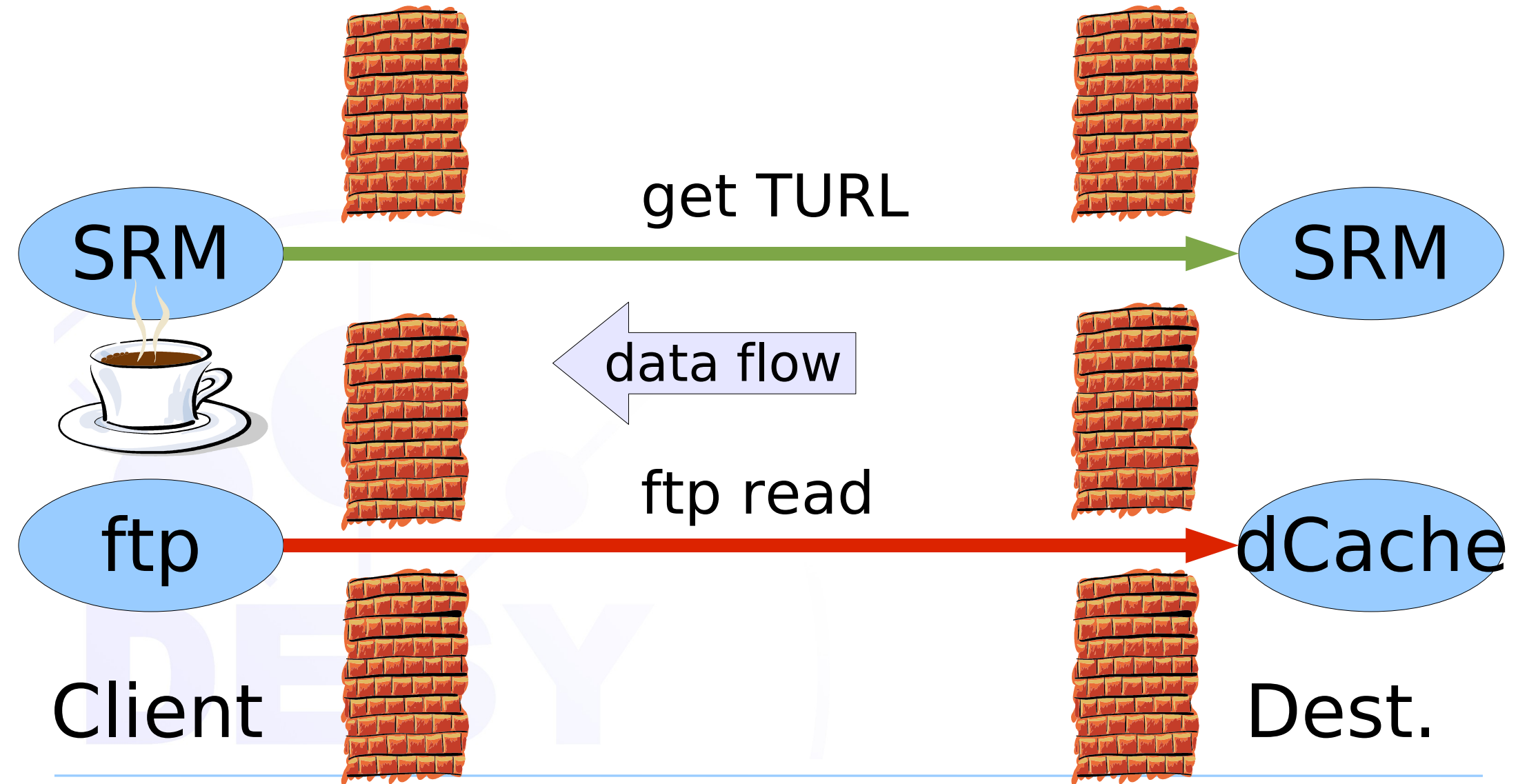
SRM PUT (gsiFTP)

dCache.ORG



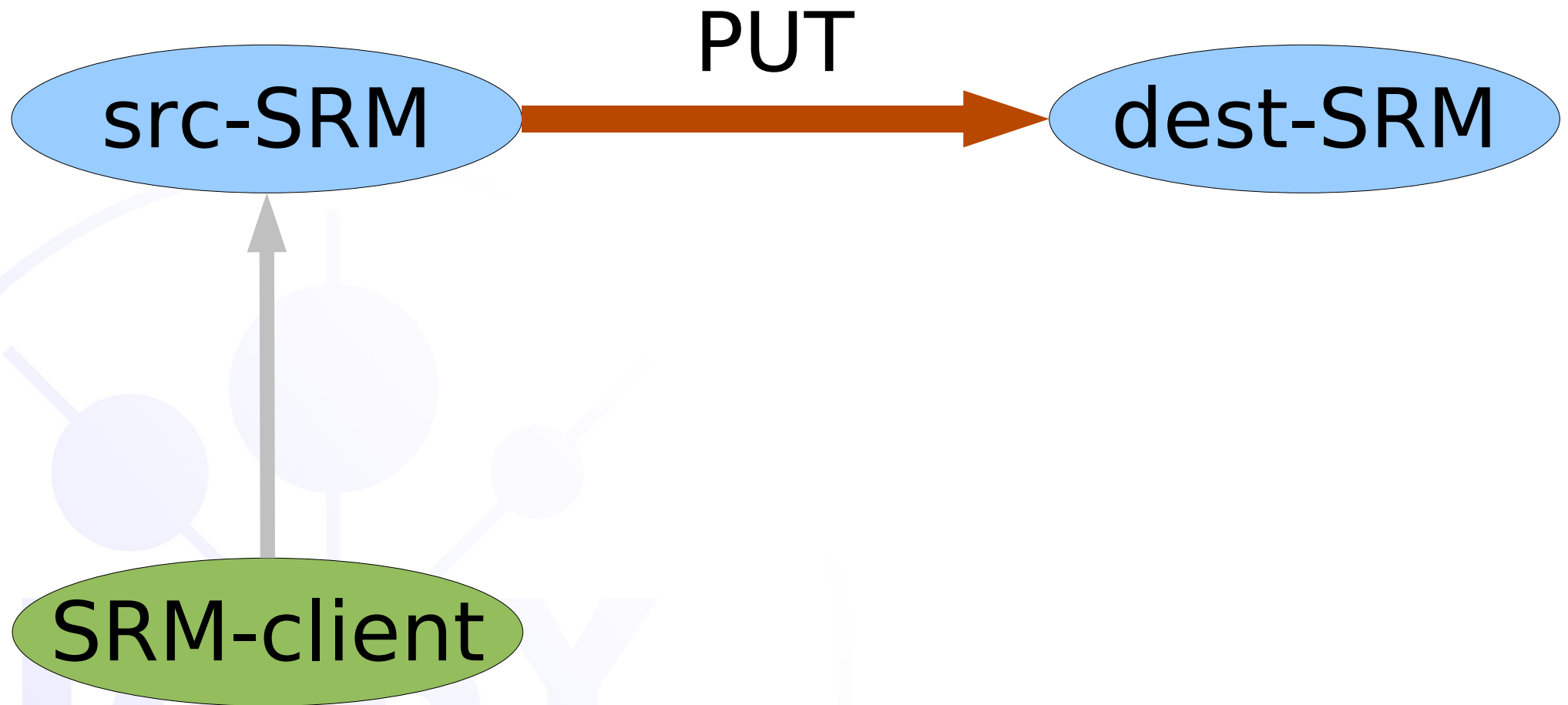
SRM GET (gsiFTP)

dCache.ORG



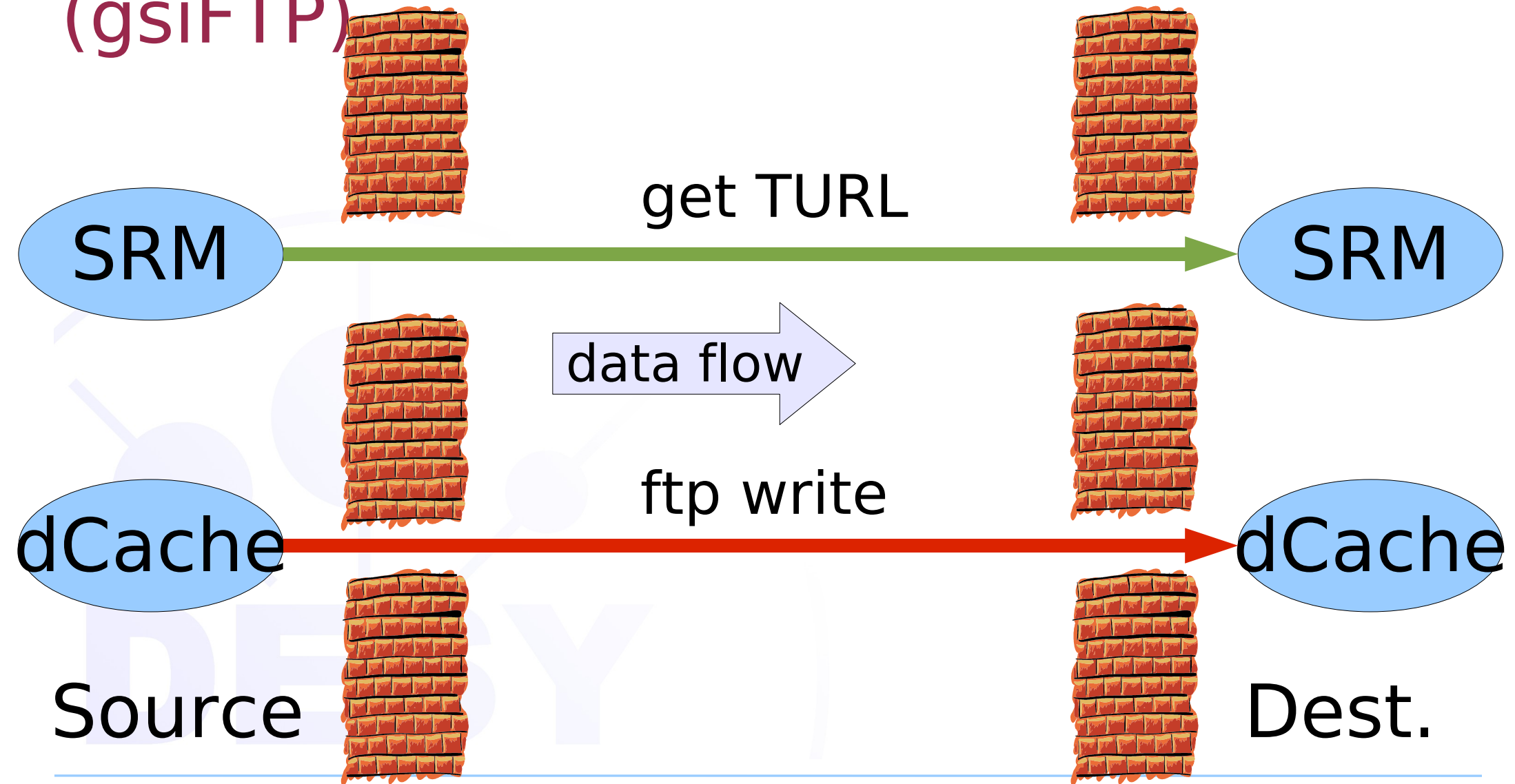
SRM COPY-PUSH

dCache.ORG



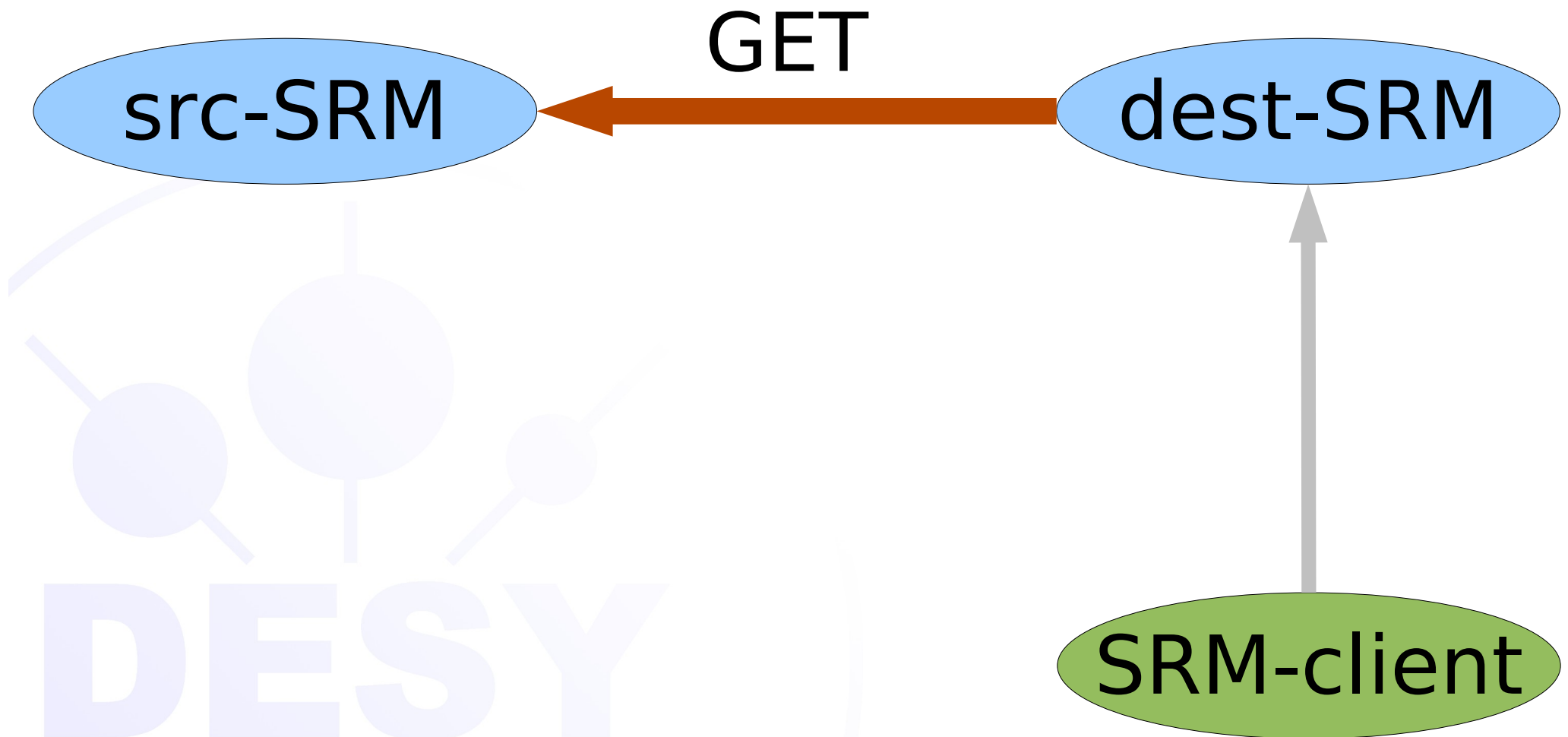
SRM COPY-PUSH (gsiFTP)

dCache.ORG



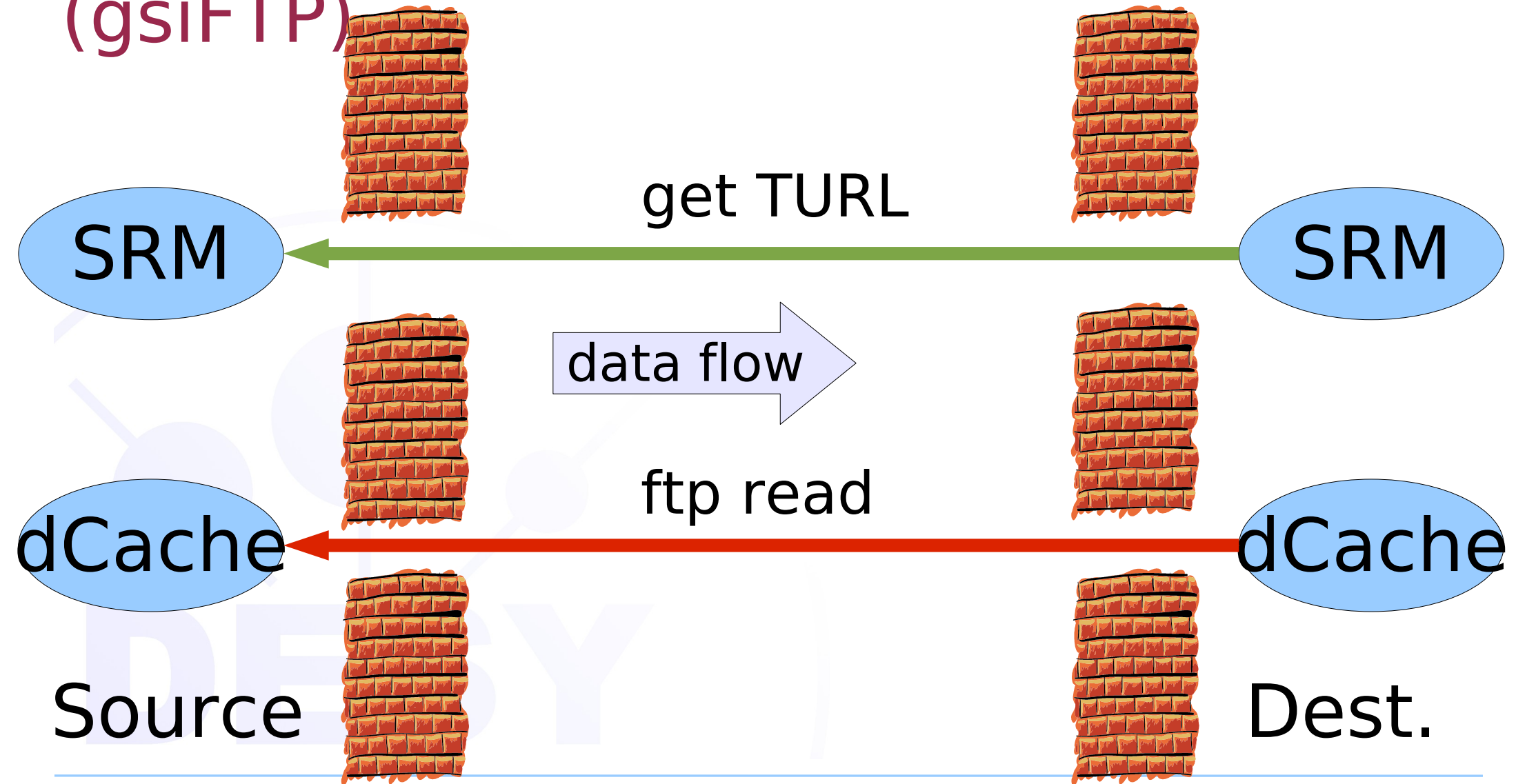
SRM COPY-PULL

dCache.ORG



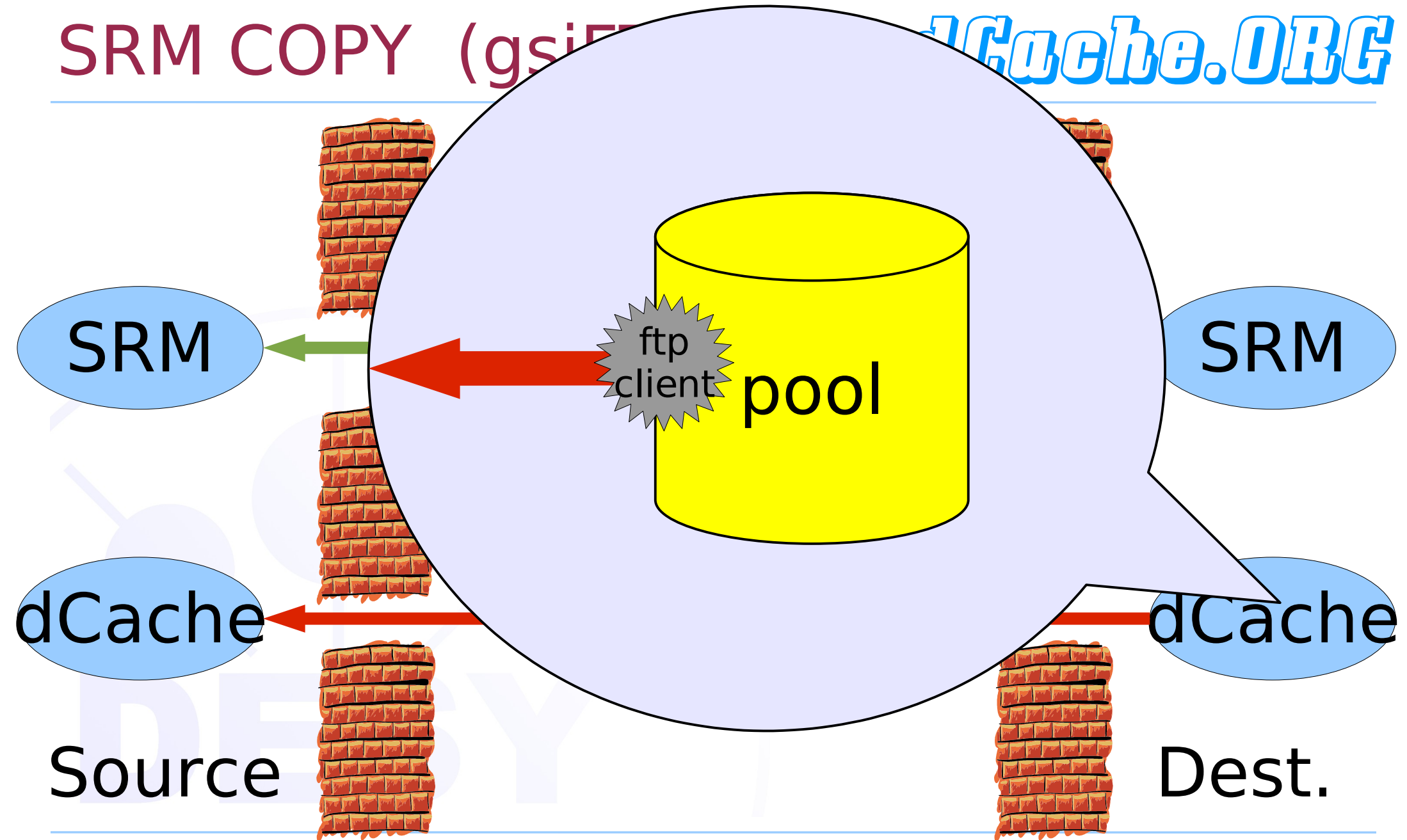
SRM COPY-PULL (gsiFTP)

dCache.ORG



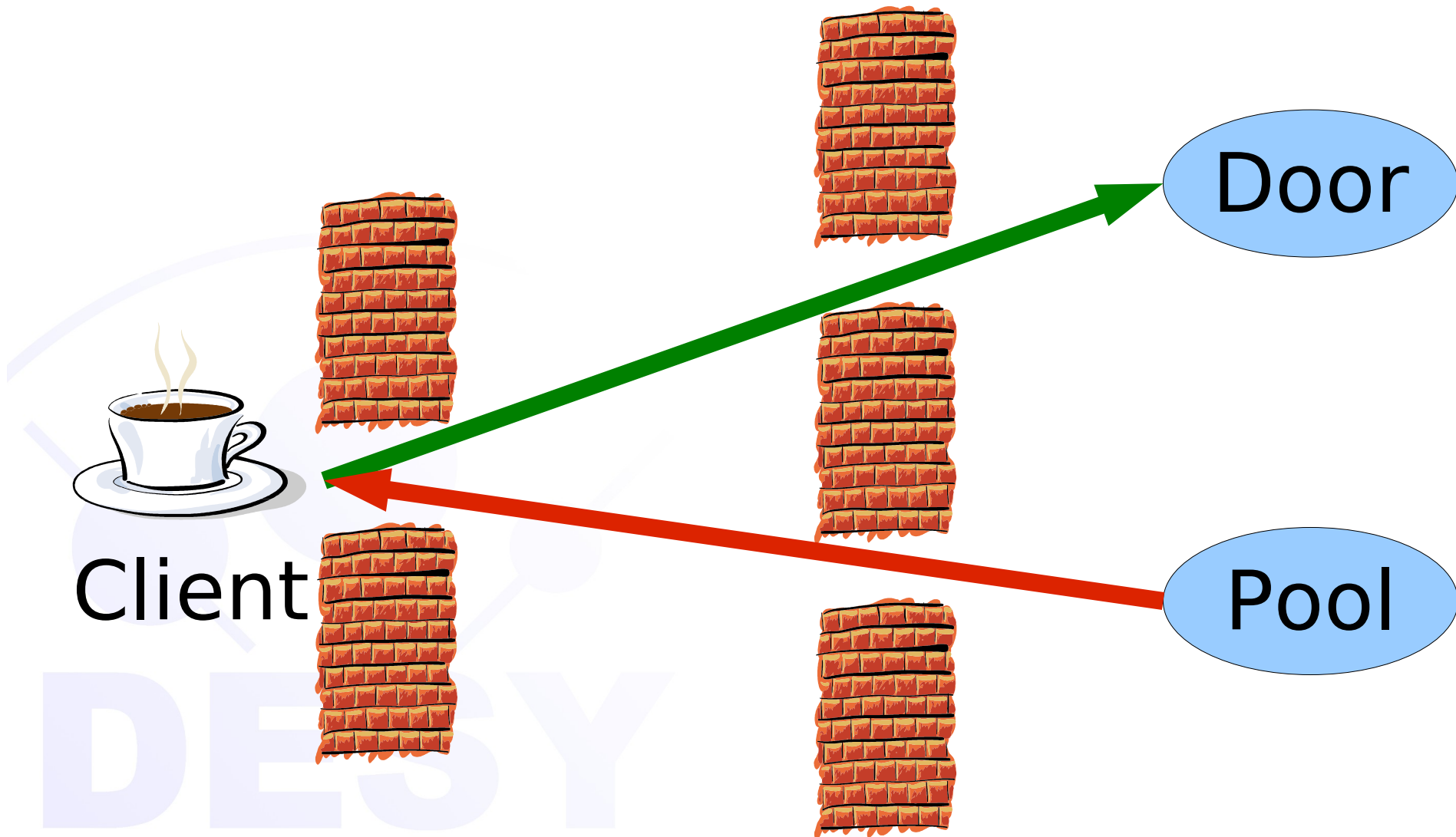
SRM COPY (gsiftp)

dCache.ORG



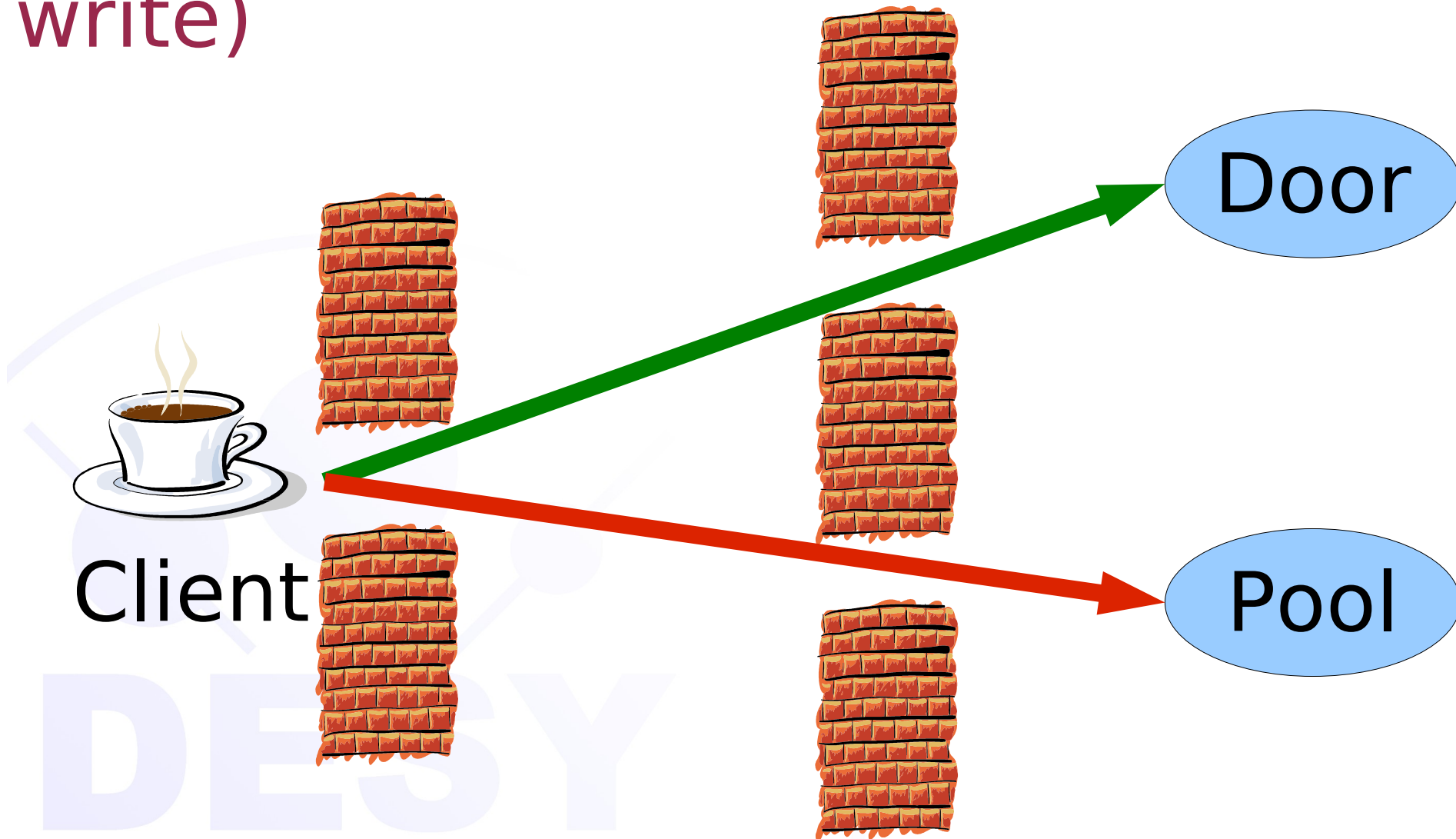
DCAP (read, write)

dCache.ORG



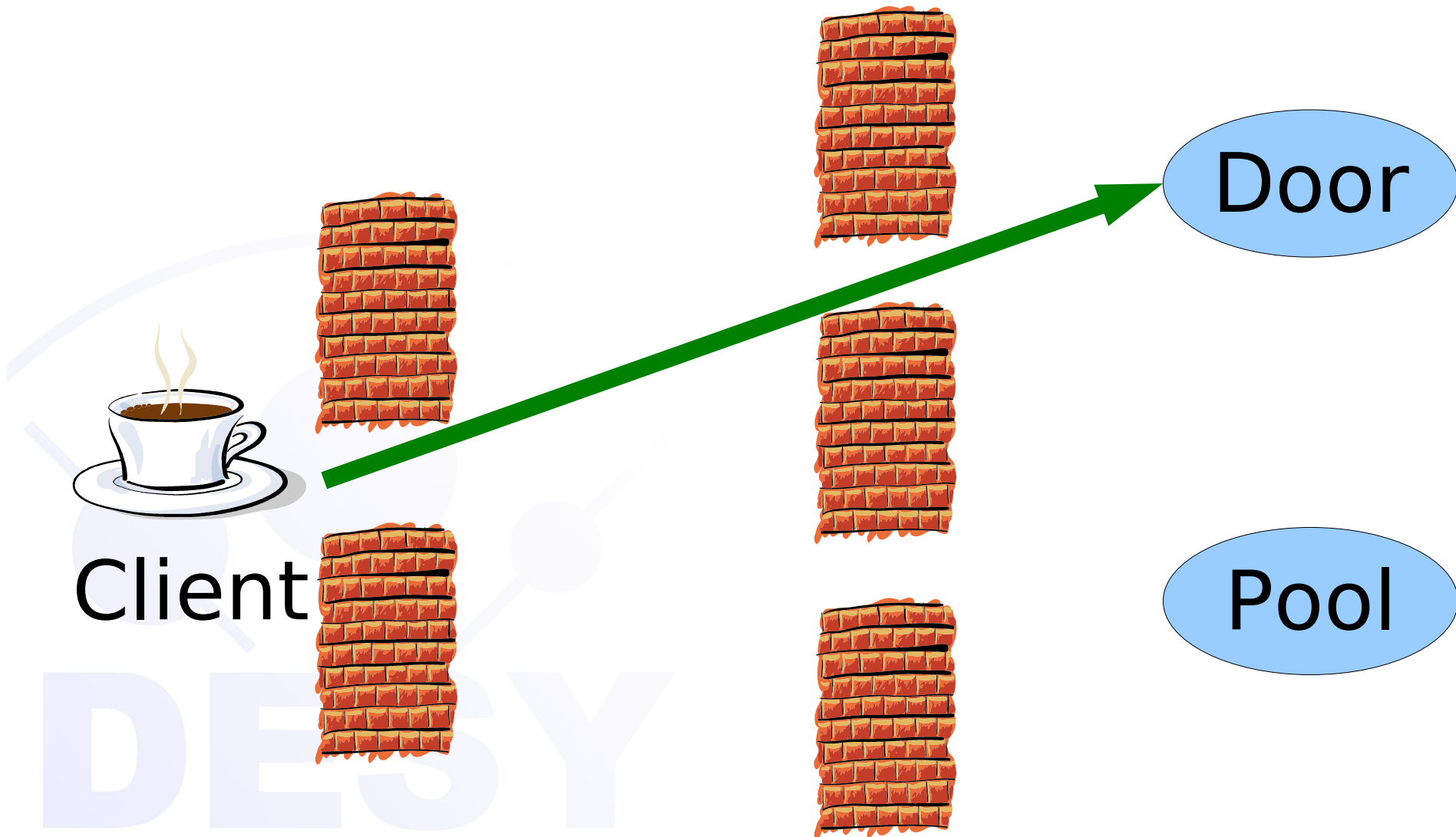
PASV. DCAP (read, write)

dCache.ORG



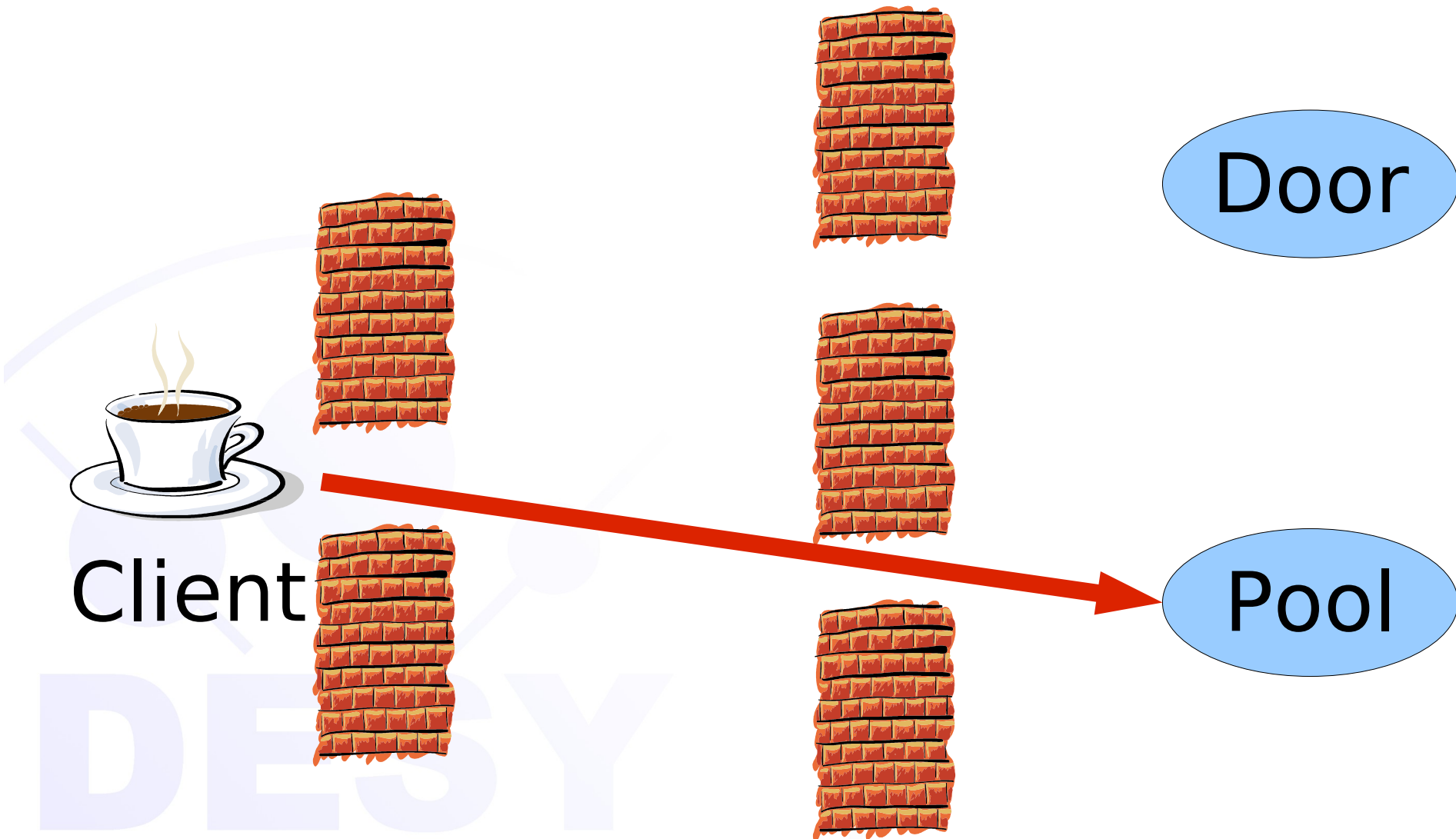
xROOTD (read, write)

dCache.ORG



xROOTD (read, write)

dCache.ORG



FTP data connections:

dCacheSetup file:

clientDataPortRange=20000:25000

java_options (dCacheSetup):

-Dorg.globus.tcp.port.range=20000,25000

DCAP and xROOTD:

java_options (dCacheSetup):

-Dorg.dcache.net.tcp.portrange=33115:33145

Tweeking (Im.config)

dCache.ORG

```
# Im.config
#
define dCacheDomain
listen dCacheDomain -port=<port>
#
#
define *
defaultroute * dCacheDomain
connect * dCacheDomain
define ImDomain
#
```

-listen <IP> option in the batch file allows to bind a door to an interface.

gsiftpAdapterInternalInterface parameter in dCacheSetup files defines the interface for pool<->adapter communication.

There is no special support for multihomed pools.

This means, that there is no special effort to propagate network/firewall setup into dCache.

As a solution for complex setups, please use PoolManager's *network units* and *links*.