

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

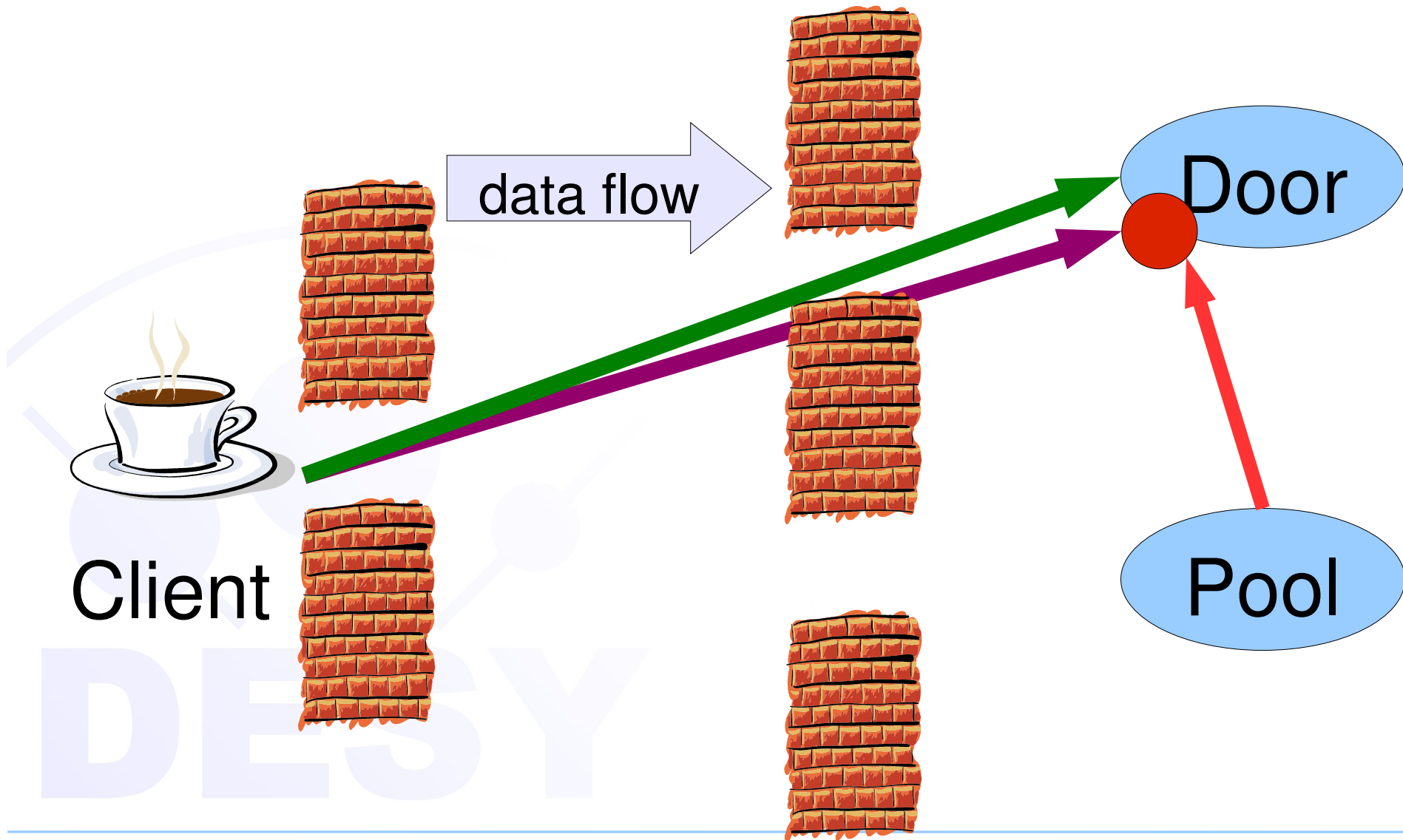
2811 => gridftp

2288 => httpd

- 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

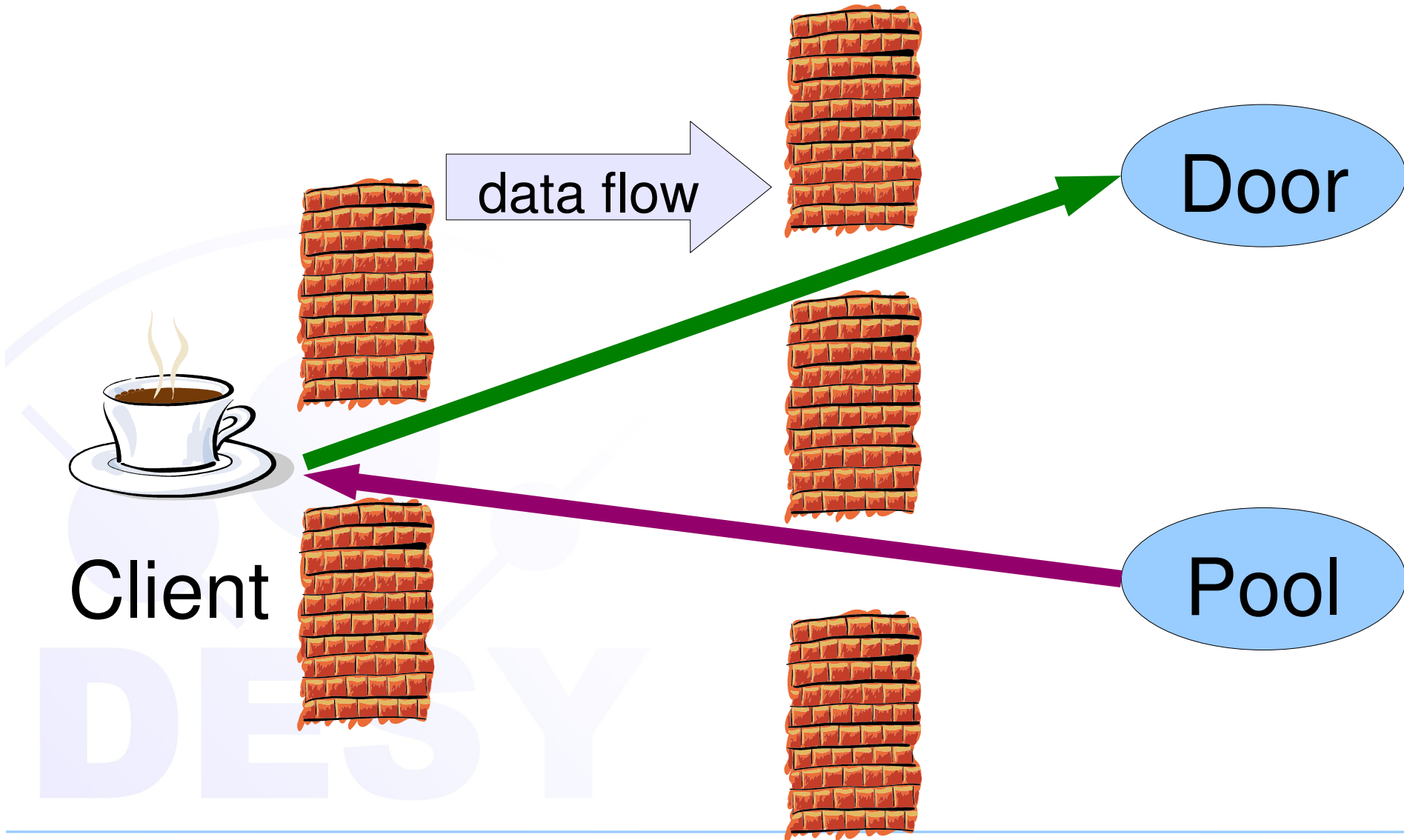
FTP write (pool passive)

dCache.ORG



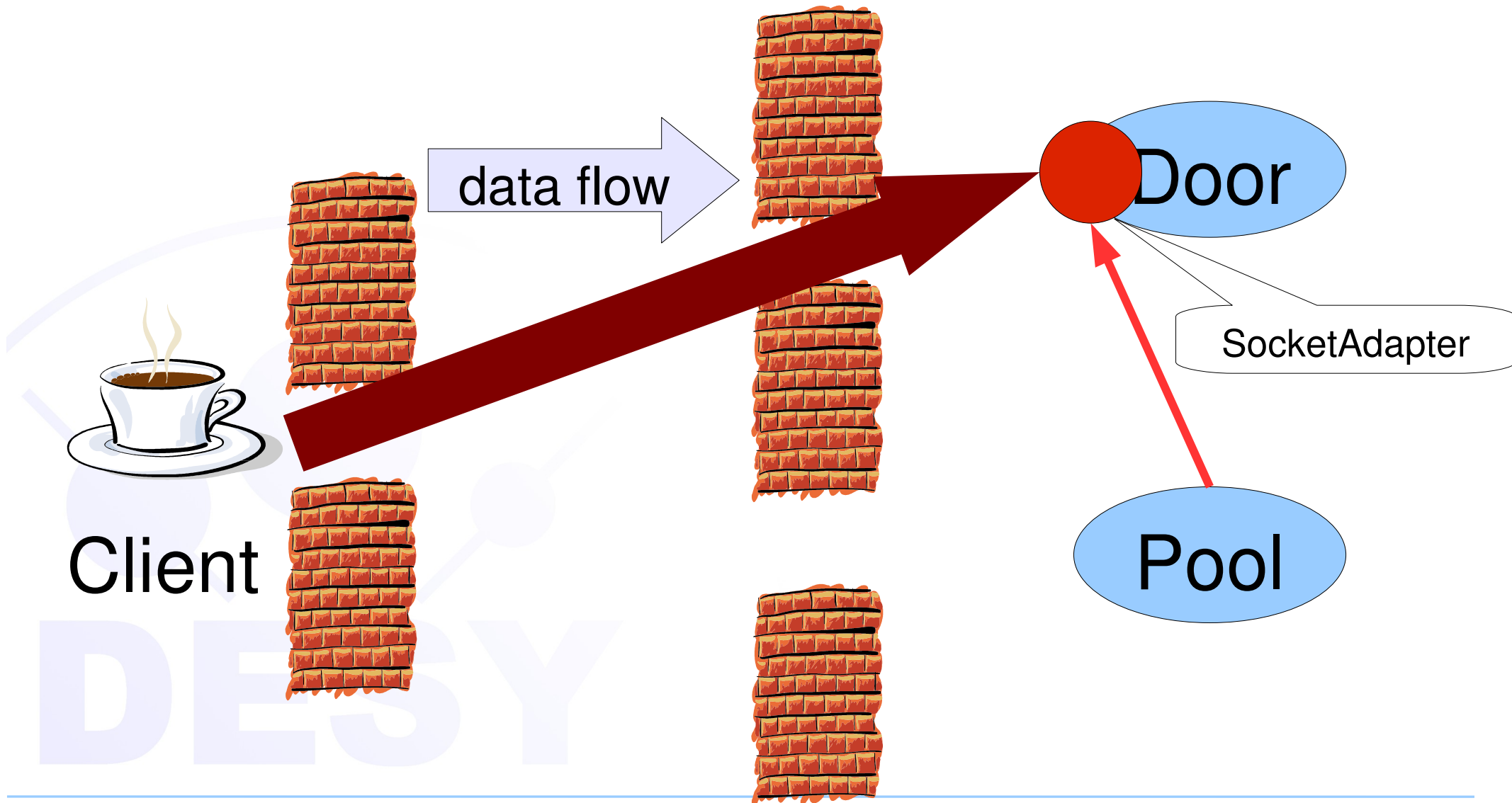
FTP write (pool active)

dCache.ORG



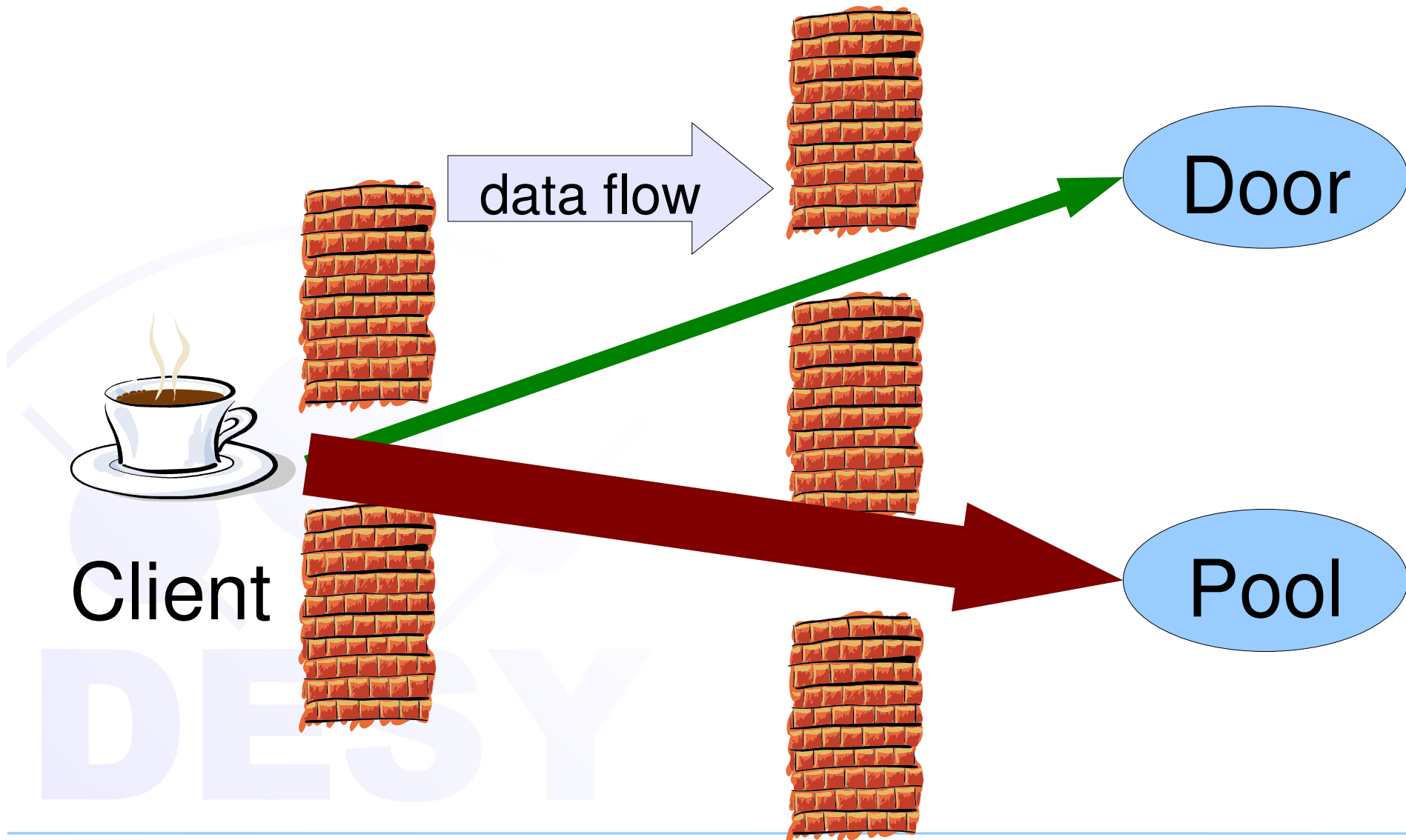
FTPv1 write (EMODE)

dCache.ORG



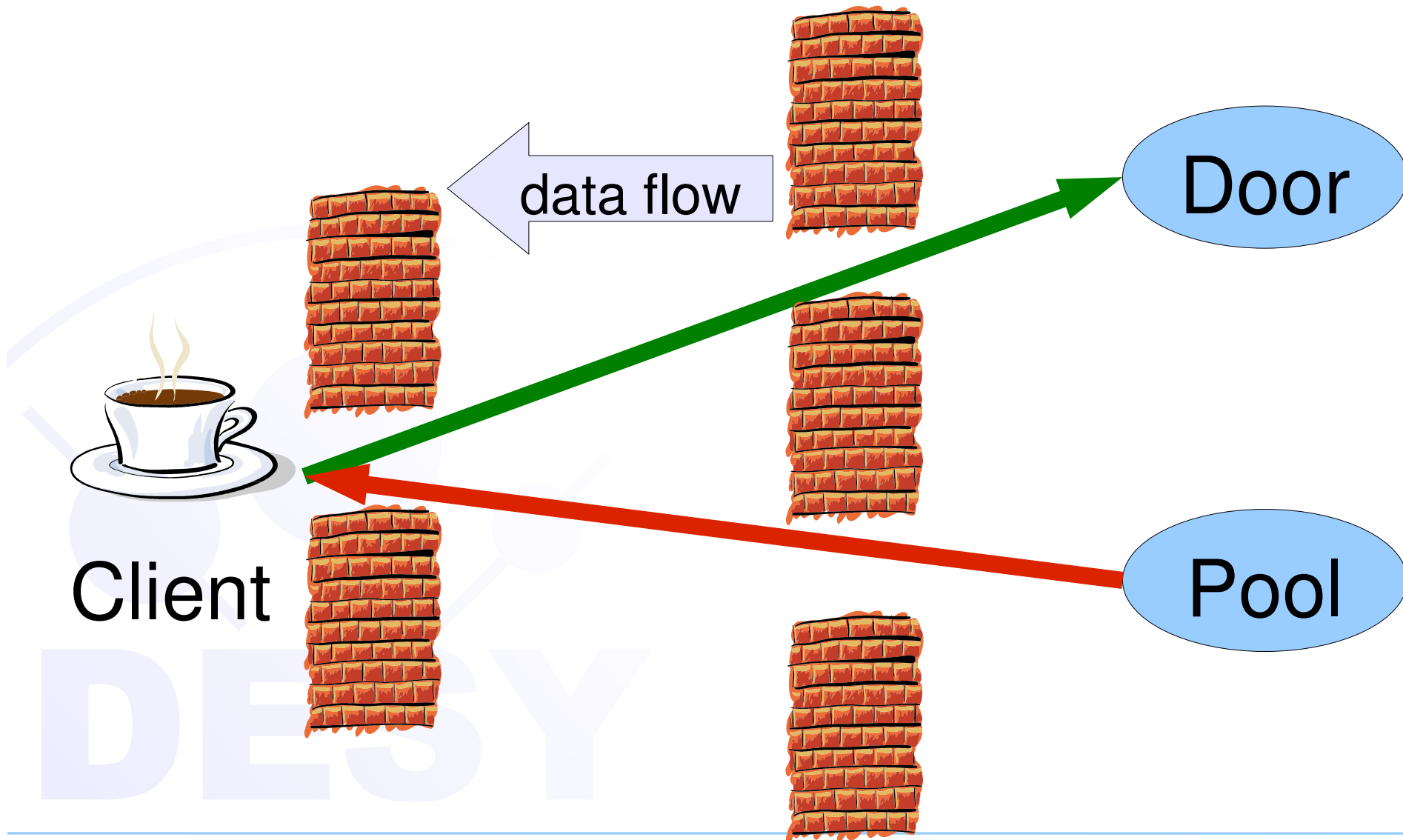
FTPv2 write (XMODE)

dCache.ORG



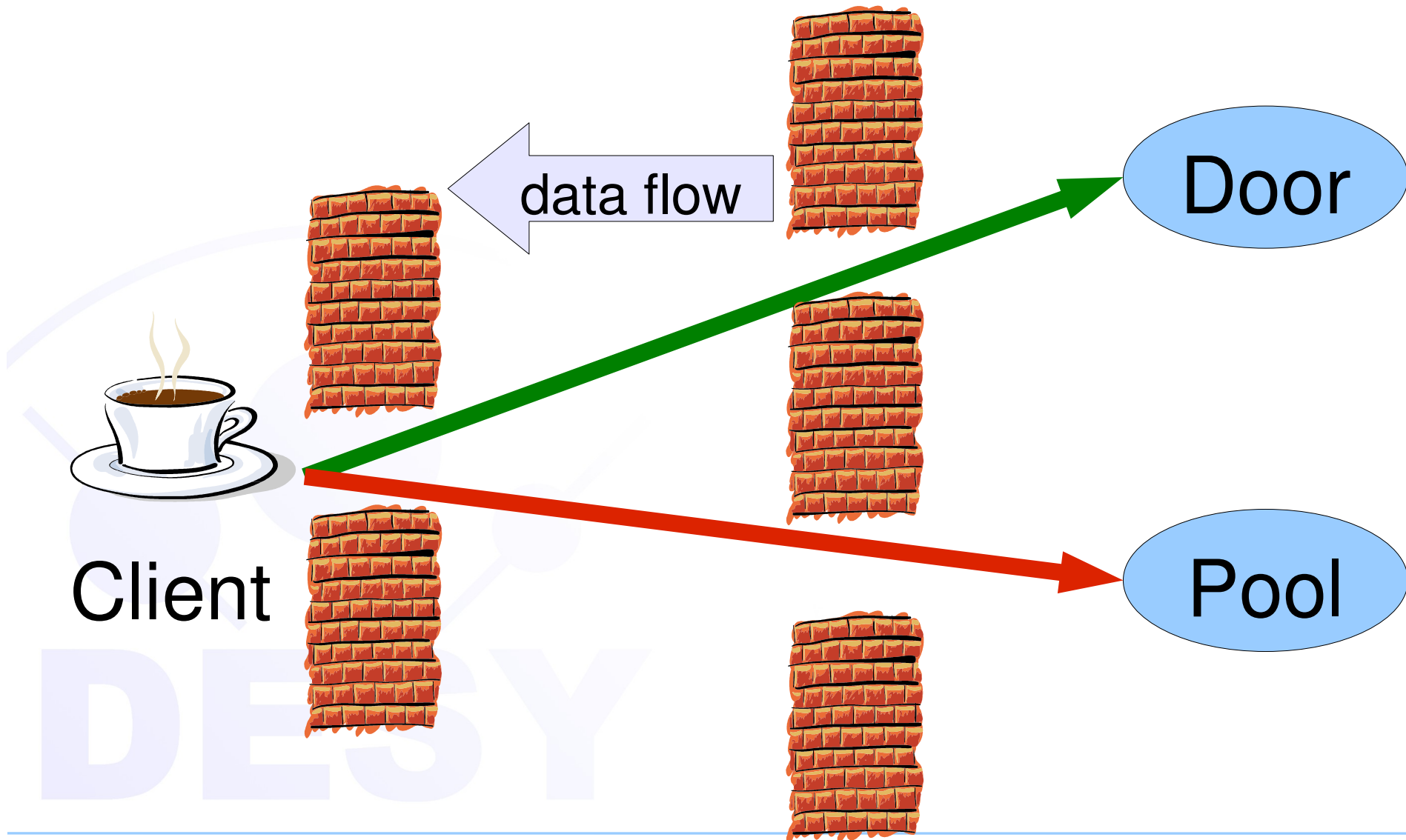
FTP read (pool active)

dCache.ORG



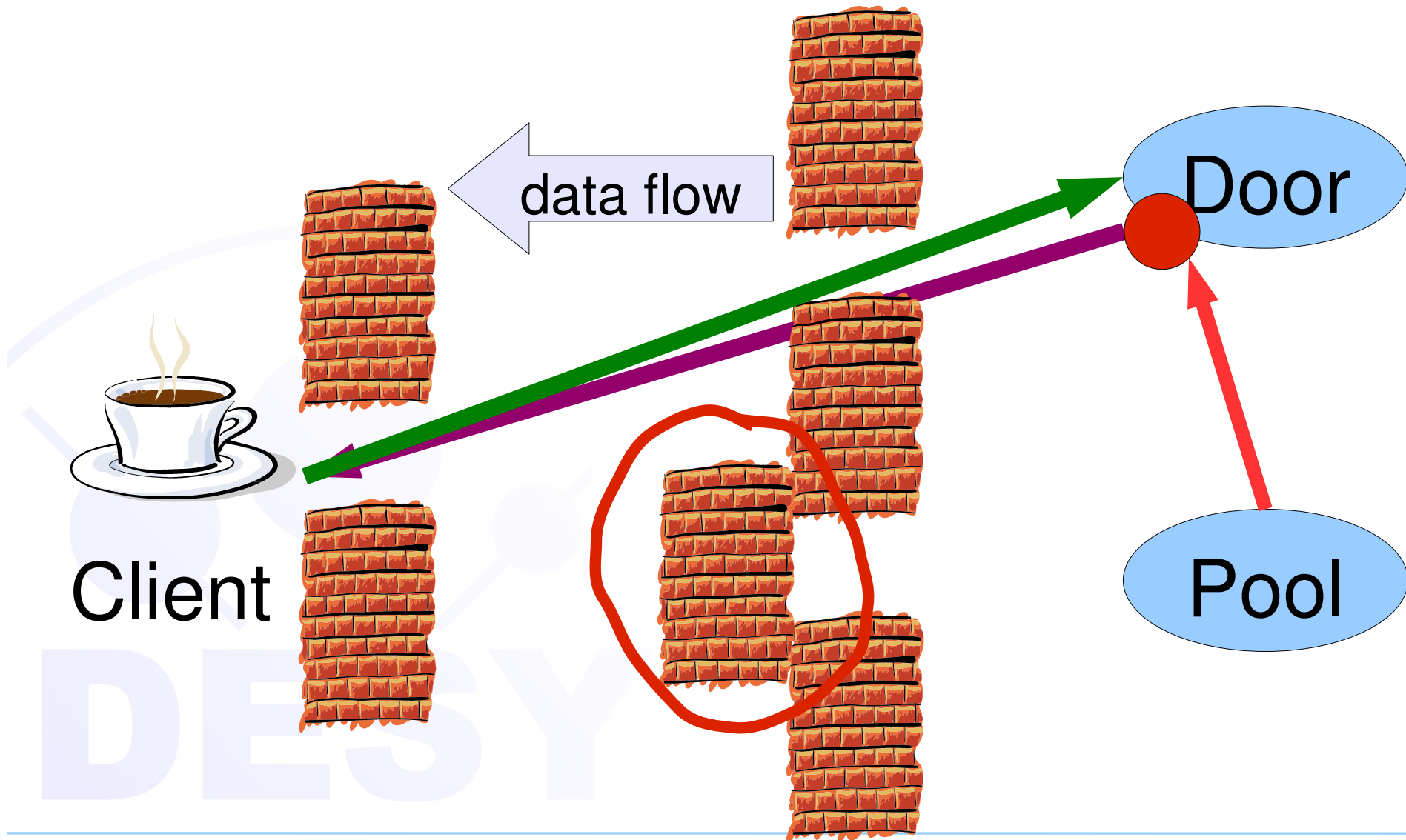
FTP read (pool passive)

dCache.ORG



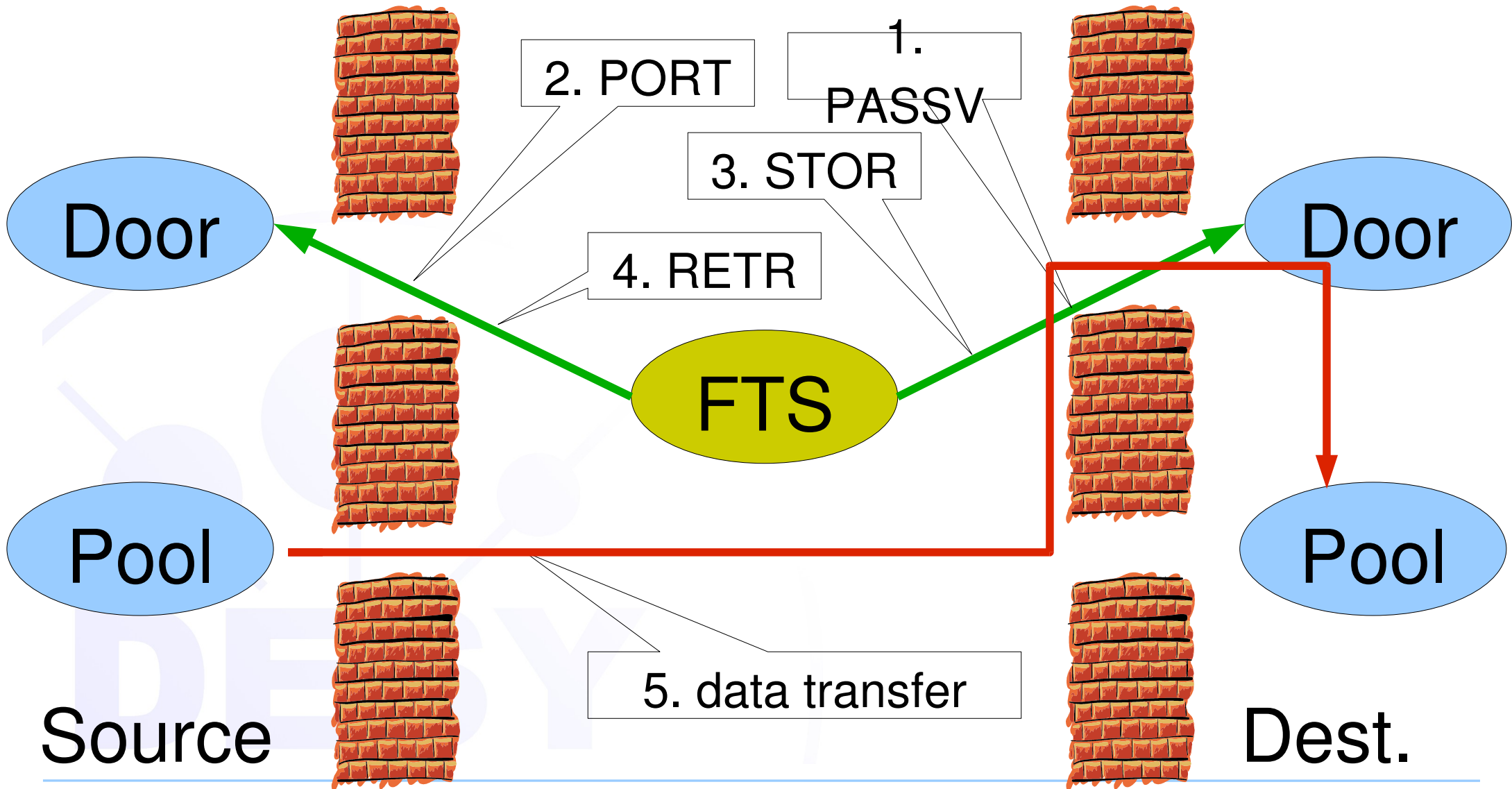
FTP read (pool passive)

dCache.ORG



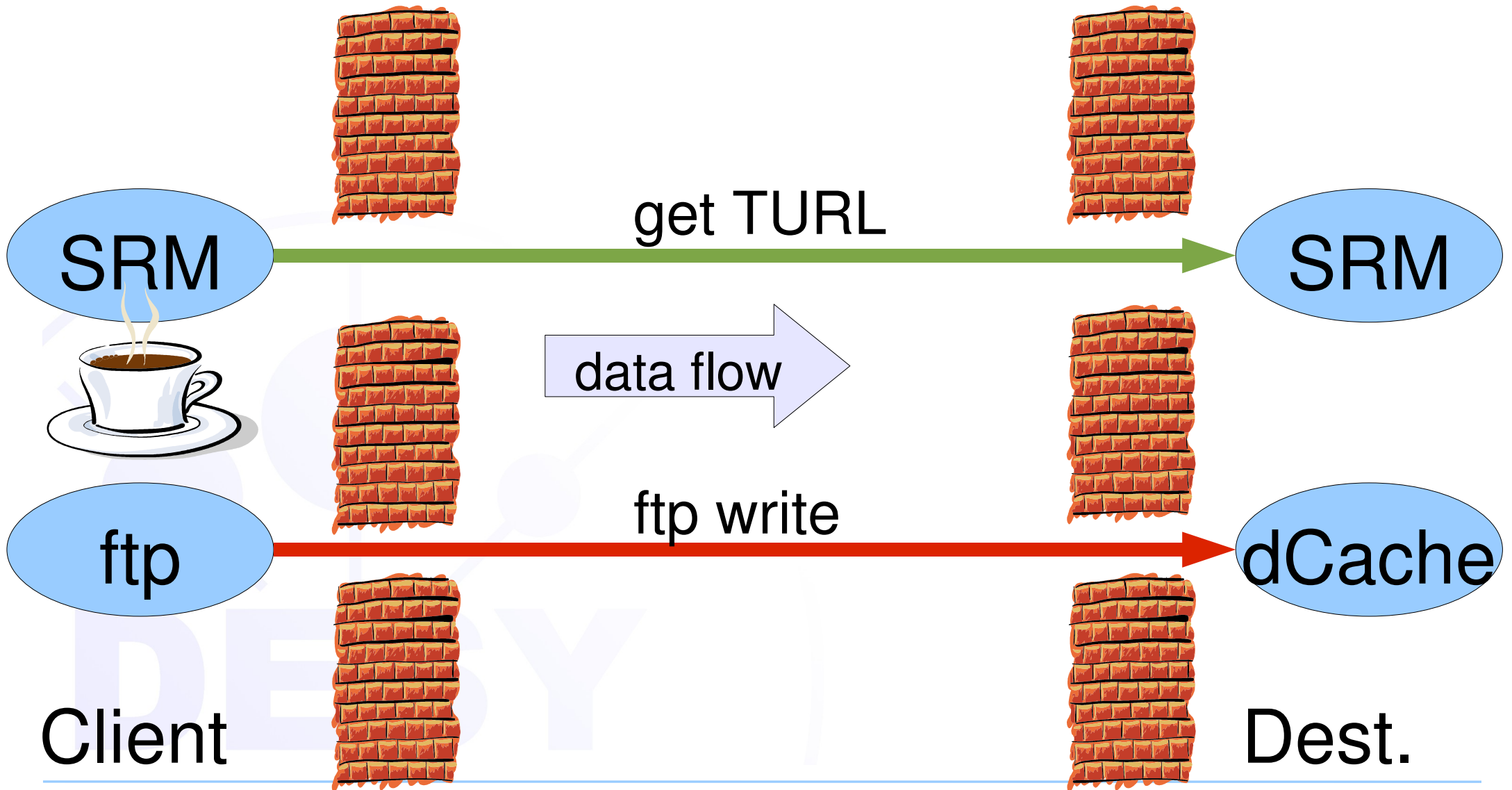
FTS(FTP) COPY

dCache.ORG



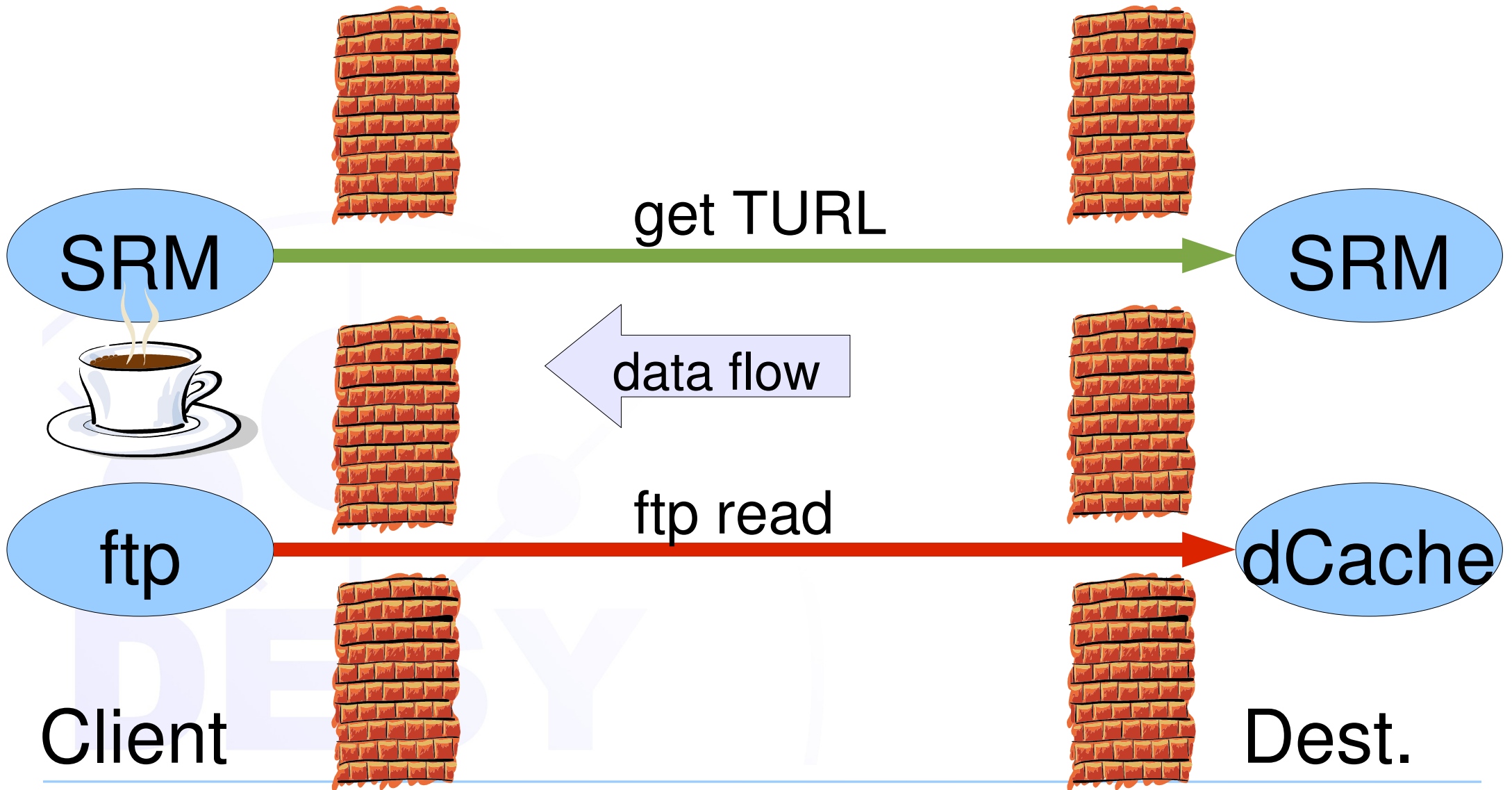
SRM PUT (gsiFTP)

dCache.ORG



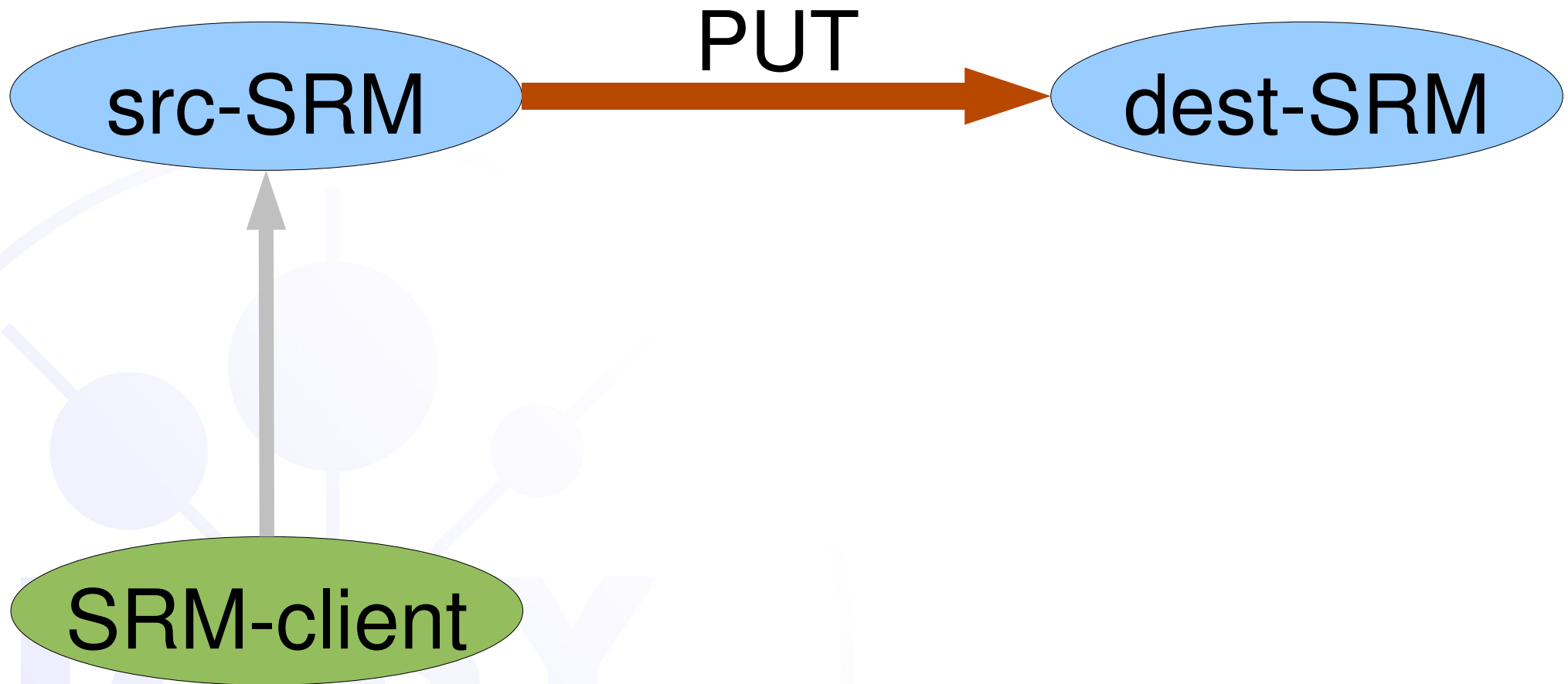
SRM GET (gsiFTP)

dCache.ORG



SRM COPY-PUSH

dCache.ORG



SRM COPY-PUSH

dCache.ORG

(gsiFTP)

SRM

get TURL

SRM

data flow

dCache

ftp write

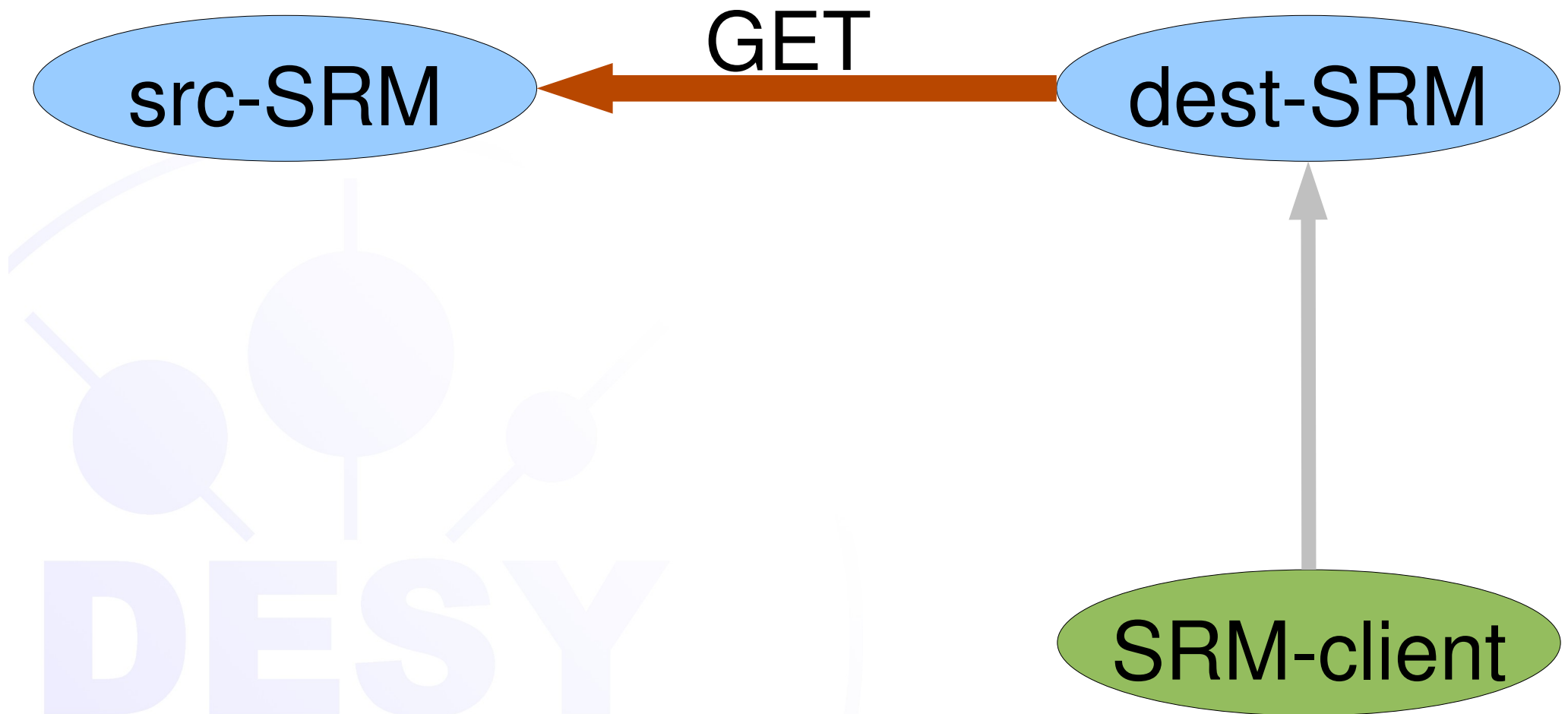
dCache

Source

Dest.

SRM COPY-PULL

dCache.ORG



SRM COPY-PULL

dCache.ORG

(gsiFTP)

get TURL

data flow

ftp read

SRM

SRM

dCache

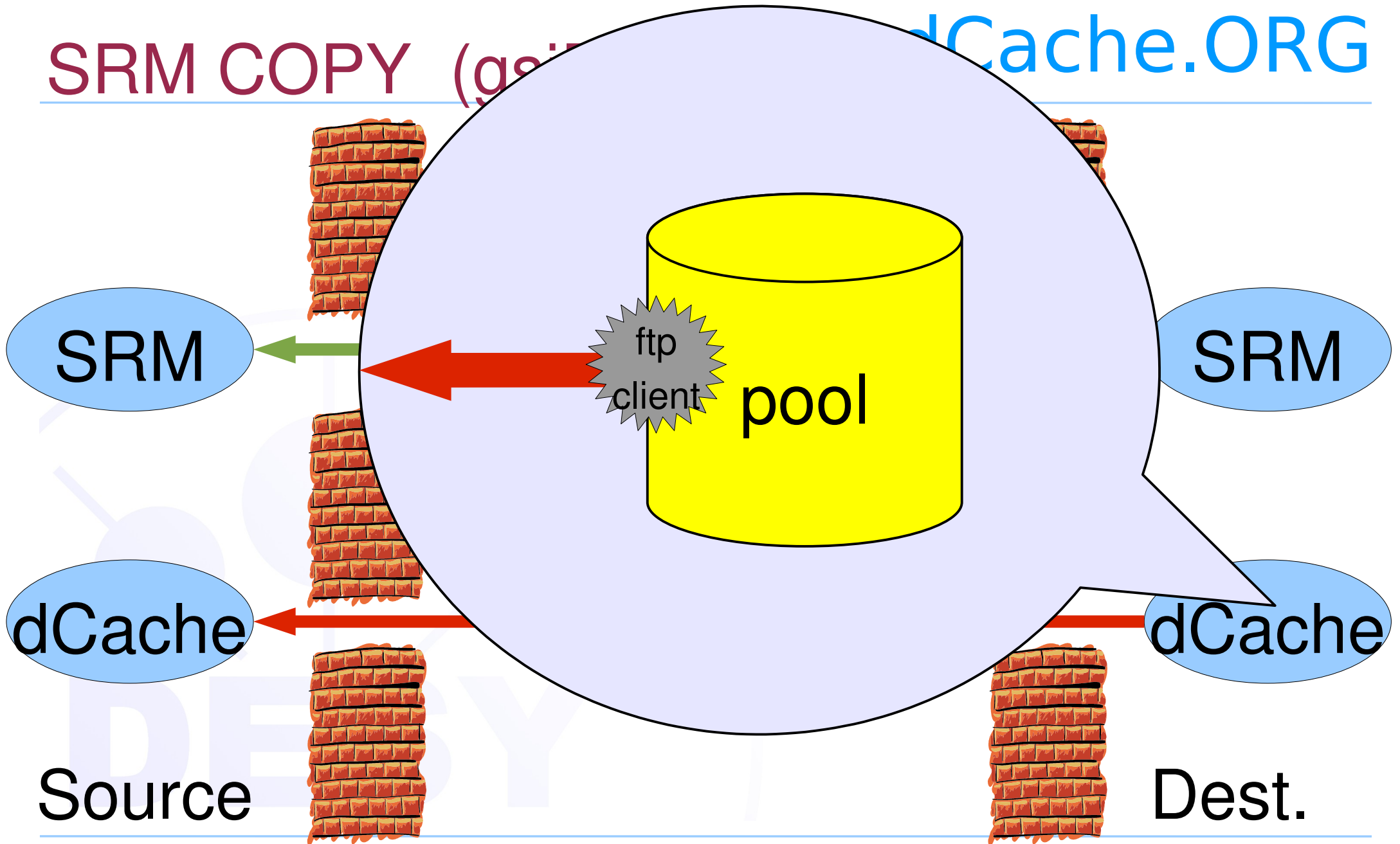
dCache

Source

Dest.

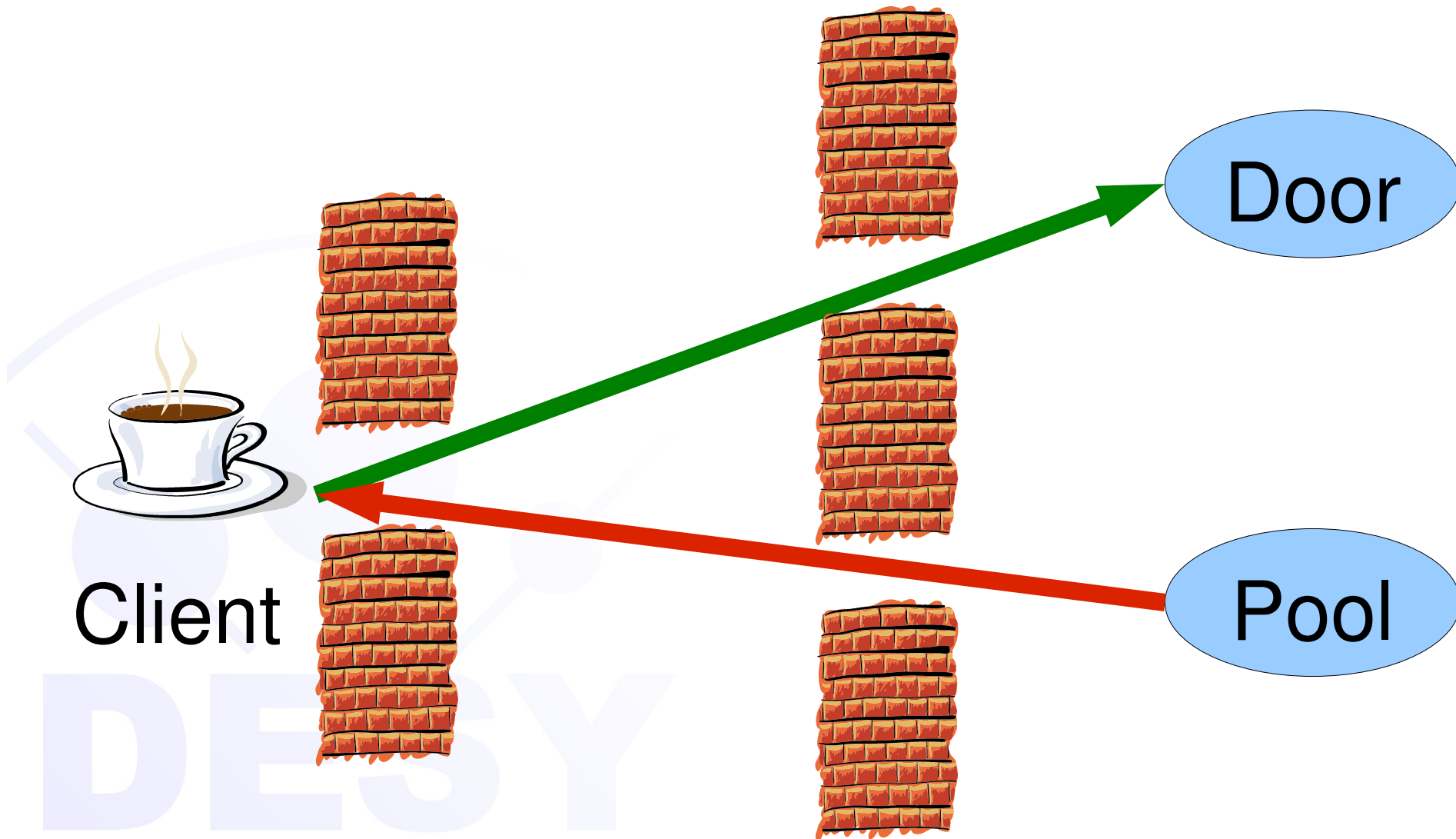
SRM COPY (get)

dCache.ORG

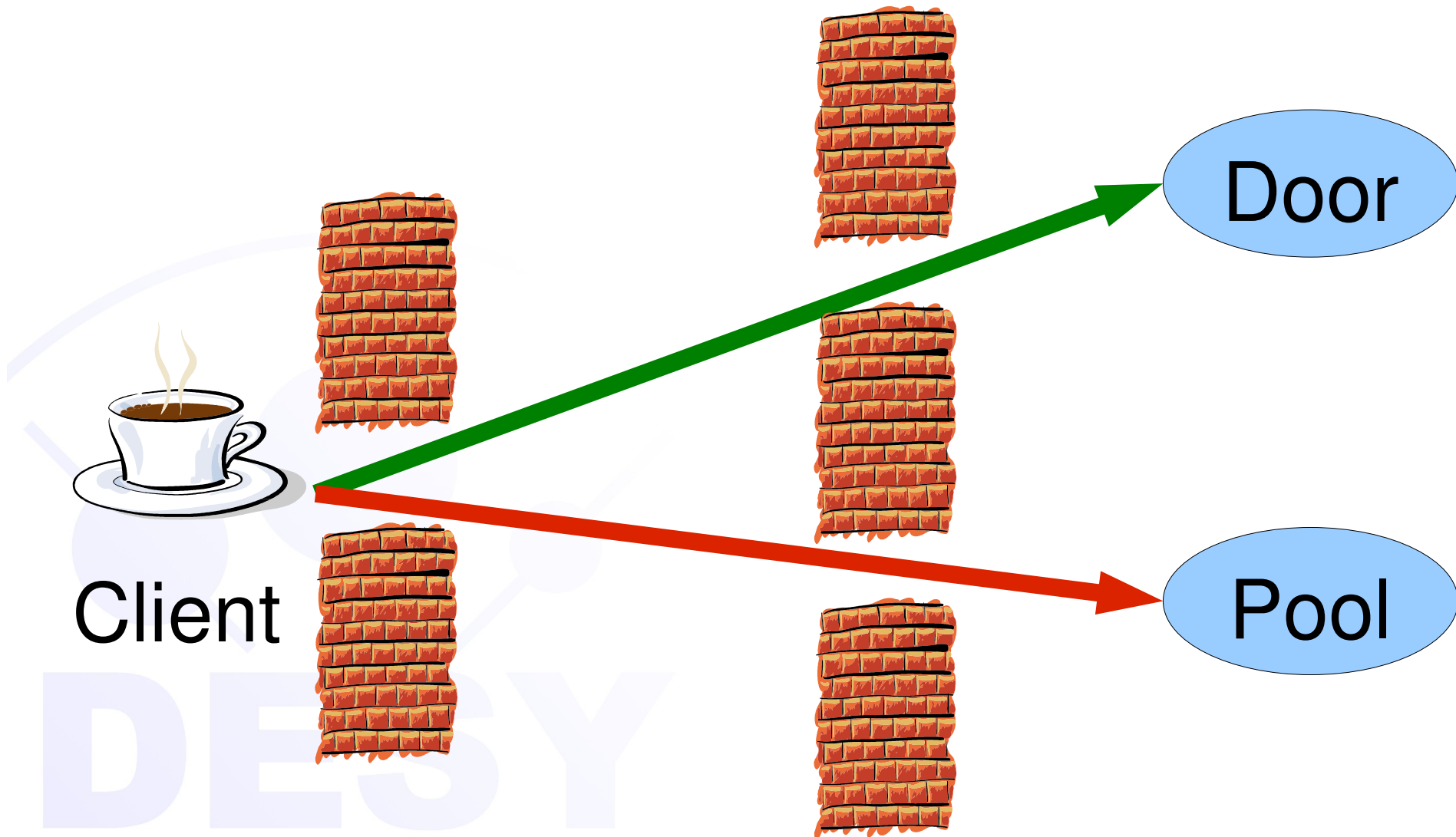


DCAP (read, write)

dCache.ORG

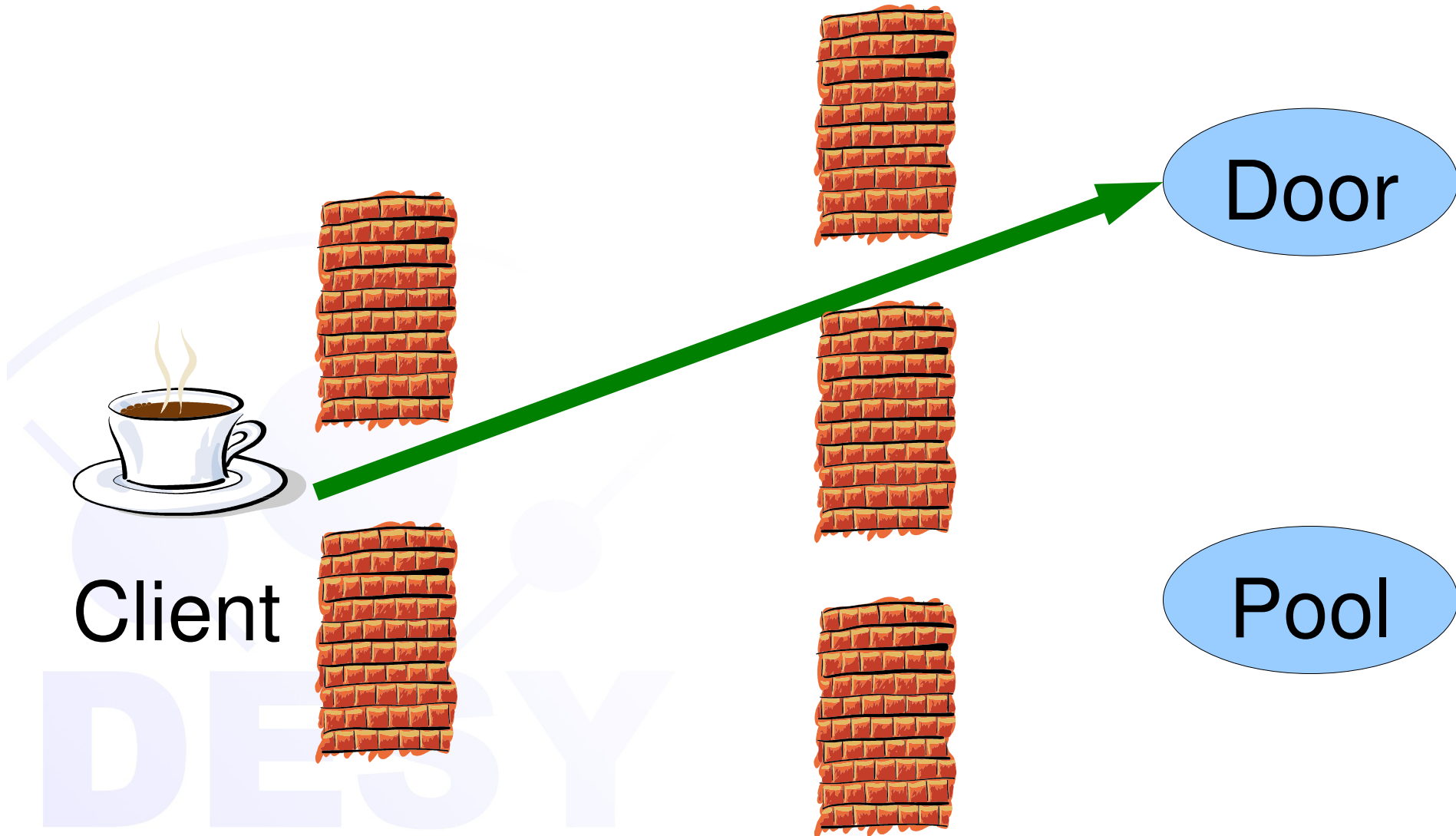


PASV. DCAP (read, write) dCache.ORG



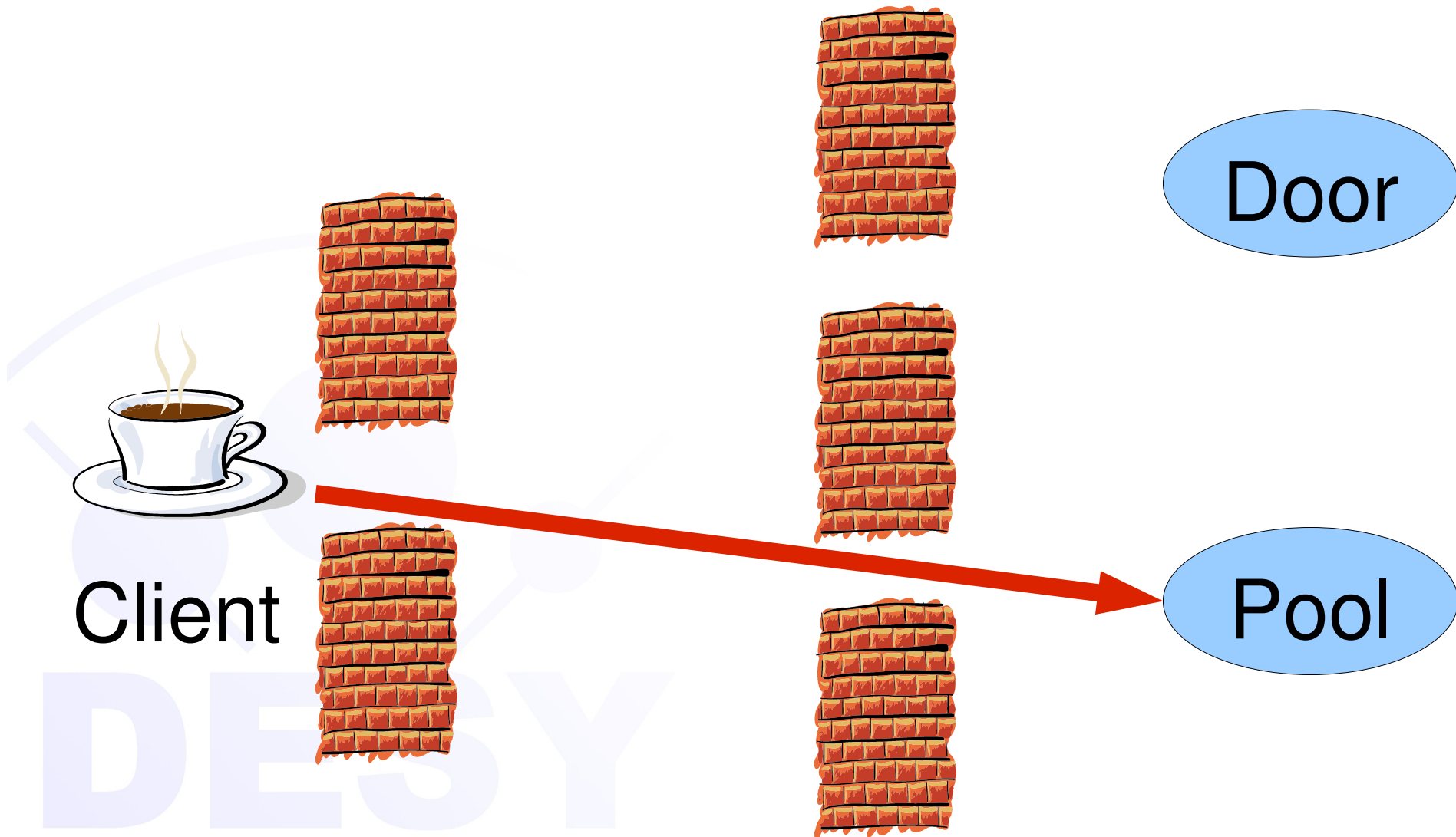
xROOTD (read, write)

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

Twееking (Im.config)

dCache.ORG

```
# Im.config
```

```
#
```

```
define dCacheDomain
```

```
listen dCacheDomain -port=<port>
```

```
#
```

```
#
```

```
define *
```

```
defaultroute * dCacheDomain
```

```
connect * dCacheDomain
```

-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*