SRM Transfers explained

Srmcp Client Server Negotiation(1)

Srmcp reads/writes a file(s)

1. srmcp issues get/put, gets request token back
2. while request status is "Pending", update request status
3. once status is ready and TURL(s) is available perform transfer from/to TURL(s)
4. once transfer completes, set file status to "Done"
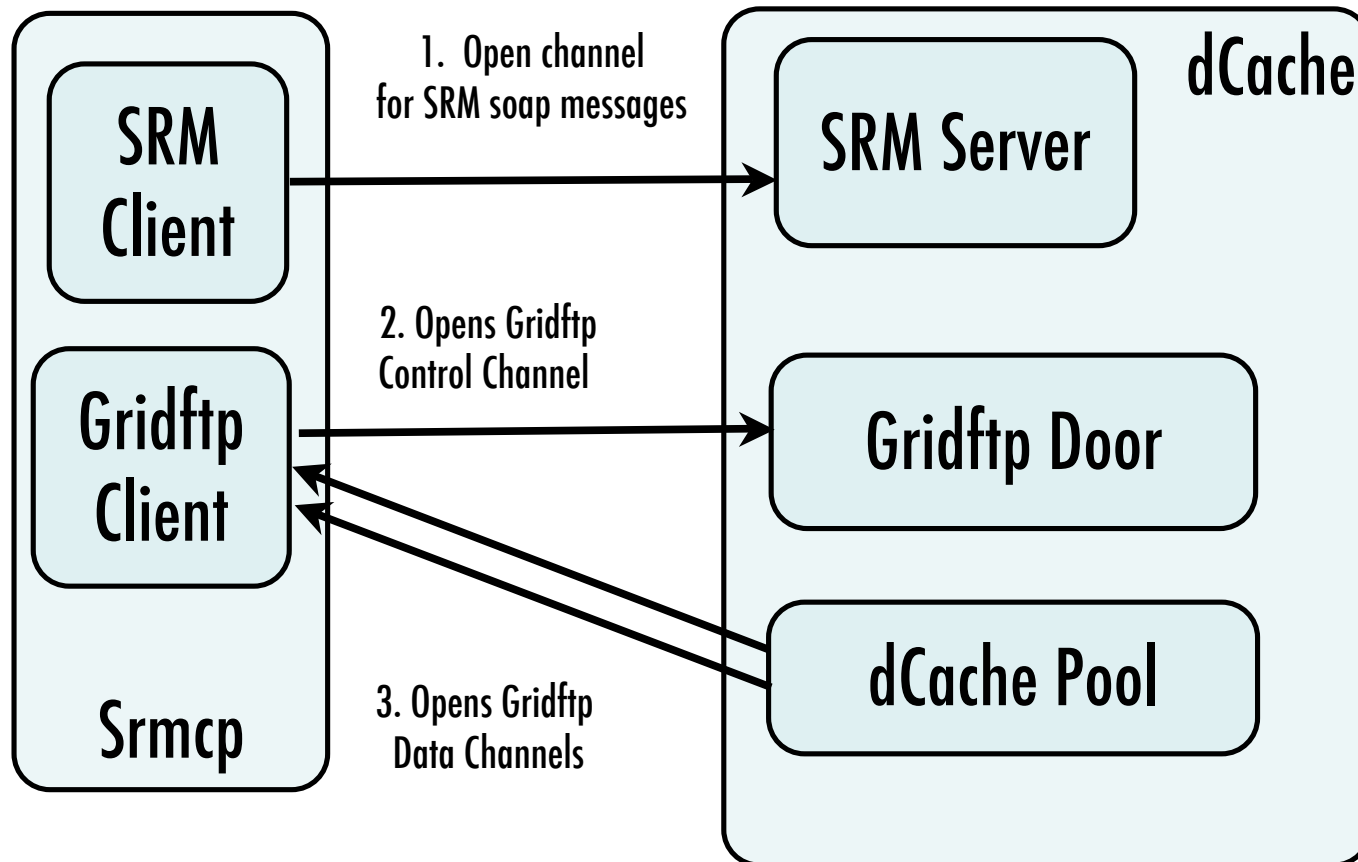
Srmcp Client Server Negotiation(2)

Srmcp copies a file from one SRM server to another

1. srmcp issues copy, gets request token back

2. while request status is "Pending", update request status

3. once status is "Done" transfer has completed, report result and exit.

SRM Get Network Flows

srmcp srm://dCache:8443/dir1/file1 file:////tmp/file1

Firewalls:

SRM Client

1. Open channel for SRM soap messages

SRM Server

dCache

Gridftp Client

2. Opens Gridftp Control Channel

Gridftp Door

Srmcp

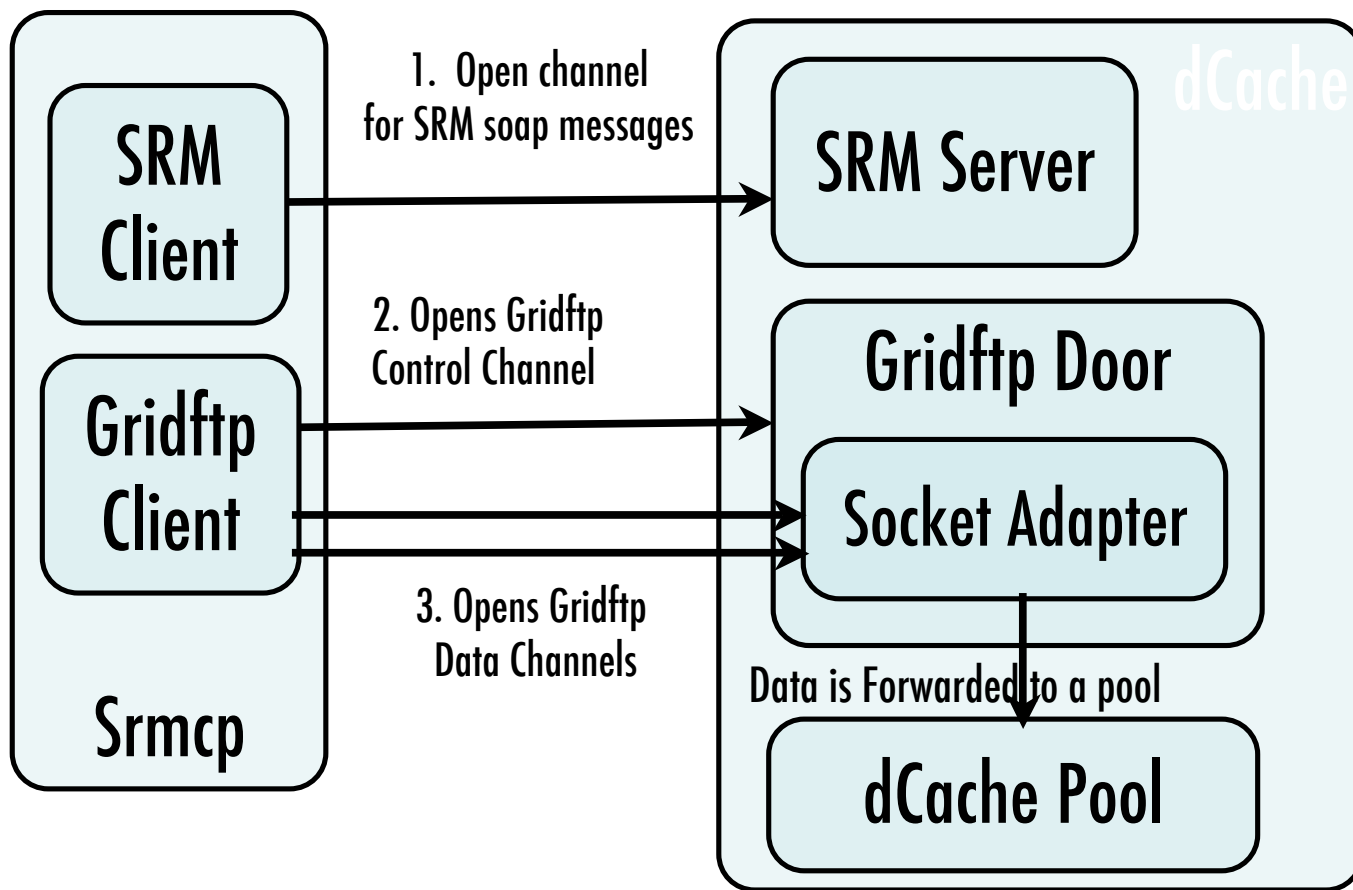3. Opens Gridftp Data Channels

dCache Pool

- Srmcp Client port range needs to be open and configured when behind a Firewall
- Pools can be behind firewall
- Srm server port must be open on srm node
- Gridftp server port must open on Gridftp door

Configuration details at
http://www.dcache.org/manuals/experts_docs/firewall.html
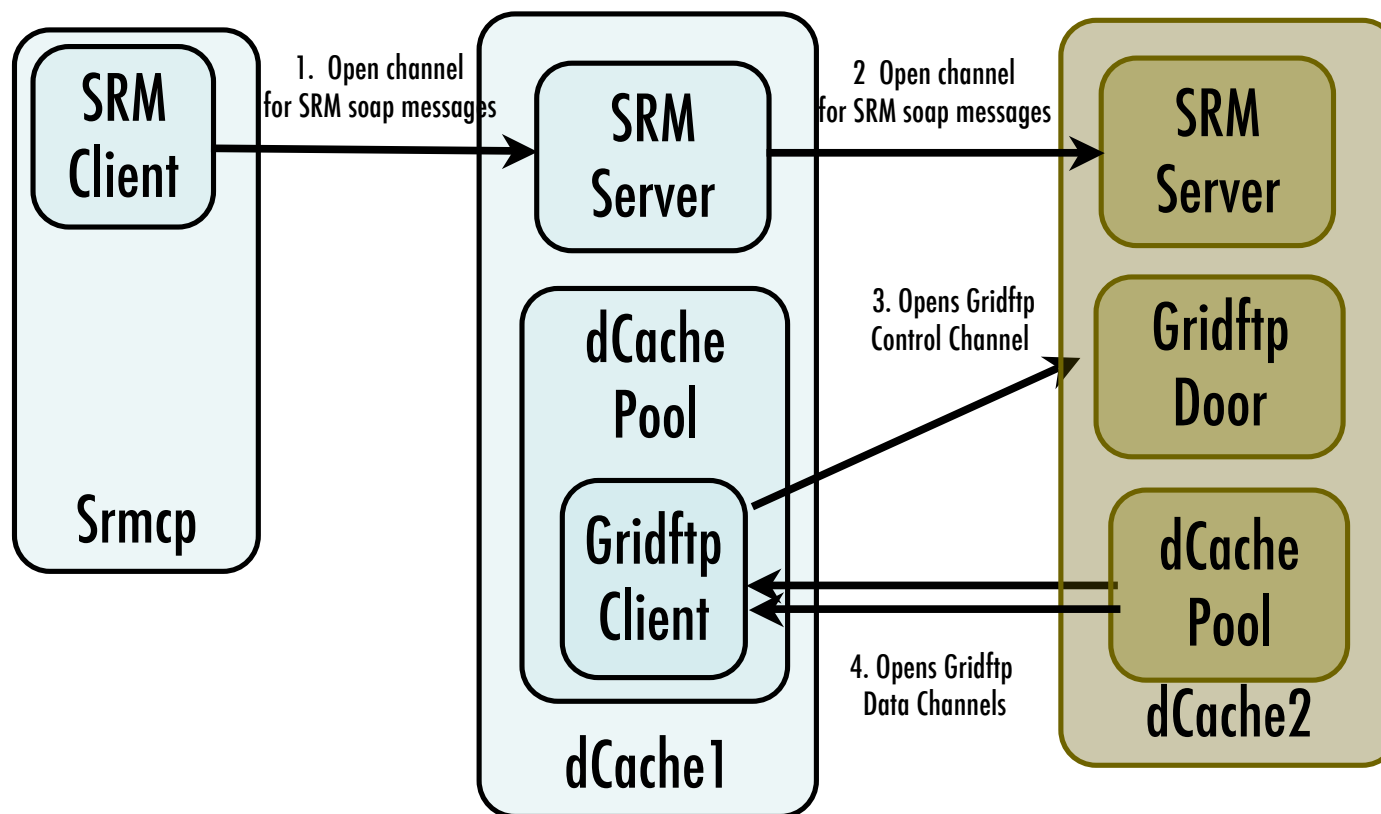
SRM Put Network Flows

srmcp file:////tmp/file1 srm://dCache:8443/dir1/file1

Firewalls:

Srmcp	dCache
SRM Client	**SRM Server**
Gridftp Client	**Gridftp Door**
	Socket Adapter
	dCache Pool

1. Open channel for SRM soap messages

2. Opens Gridftp Control Channel

3. Opens Gridftp Data Channels

Data is Forwarded to a pool

- Srmcp Client can be behind a Firewall
- Pools can be behind firewall
- Srm server port must be open on srm node
- Gridftp port and port range for data must be configured on Gridftp door

Configuration details at
http://www.dcache.org/manuals/experts_docs/firewall.html

SRM Copy in Pull Mode Network Flows

srmcp srm://dCache2:8443/dir1/file1
srm://dCache1:8443/dir1/file1.copy

Firewalls:

SRM Client — Srmcp

1. Open channel for SRM soap messages

SRM Server

2 Open channel for SRM soap messages

SRM Server

dCache Pool

3. Opens Gridftp Control Channel

Gridftp Door

Gridftp Client

dCache Pool

4. Opens Gridftp Data Channels
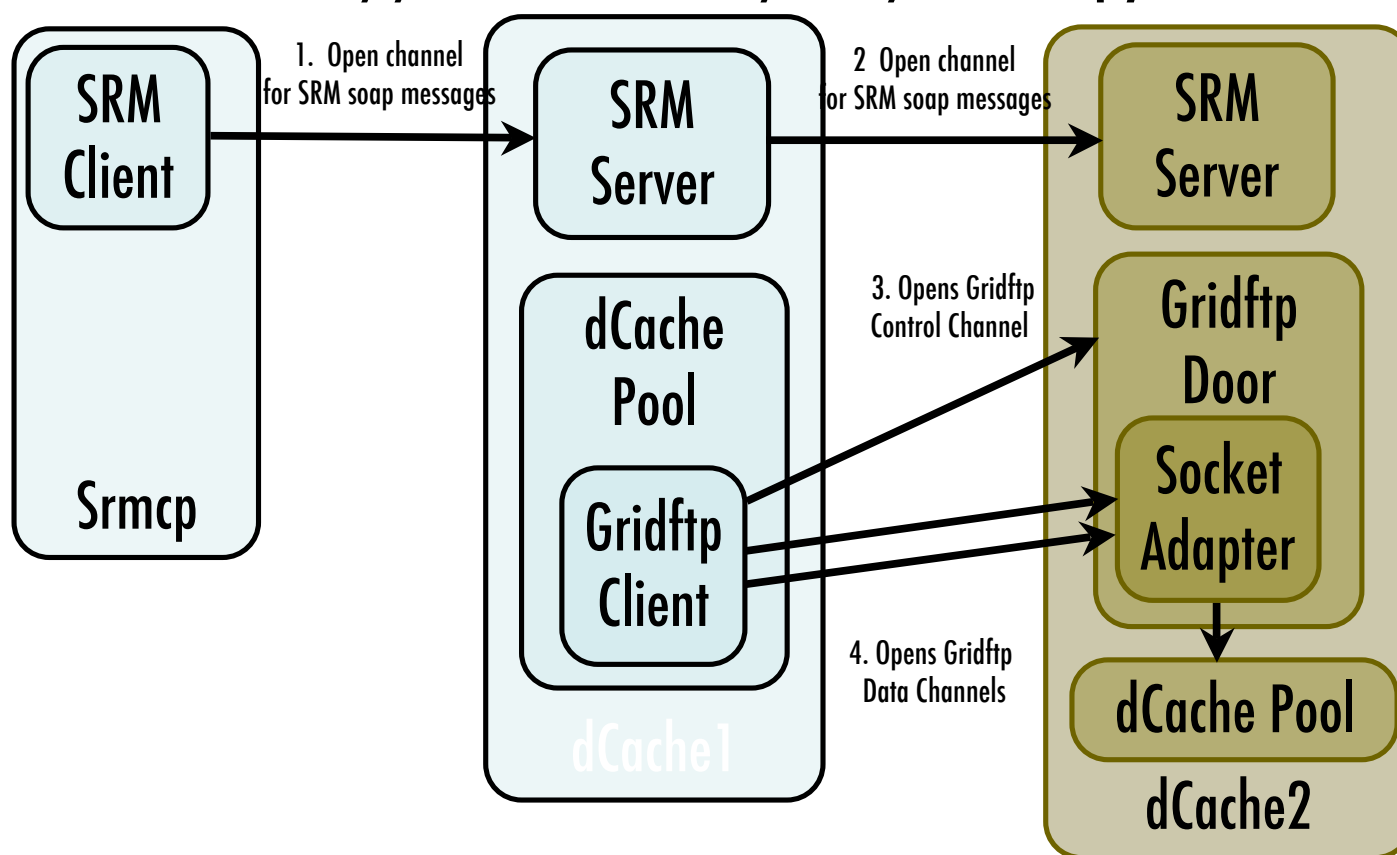
dCache1

dCache2

- Srmcp Client can be behind a Firewall
- dCache1 Pools need a port range set up and configured
- Srm servers ports must be open on srm nodes
- dCache2 Gridftp server port must be open on Gridftp door node

Configuration details at
http://www.dcache.org/manuals/experts_docs/firewall.html

SRM Copy in Push Mode Network Flows

srmcp -pushmode srm://dCache1:8443/dir1/file1
srm://dCache2:8443/dir1/file1.copy

Firewalls:

SRM Client

Srmcp

1. Open channel for SRM soap messages

SRM Server

dCache Pool

Gridftp Client

dCache1

2 Open channel for SRM soap messages

3. Opens Gridftp Control Channel

4. Opens Gridftp Data Channels

SRM Server

Gridftp Door

Socket Adapter

dCache Pool

dCache2

- Srmcp Client can be behind a Firewall
- dCache1 Pools and dCache2 Pools can be behind firewalls
- Srm servers ports must be open on srm nodes
- dCache2 Gridftp server must have a port range opne and configured port must be open on Gridftp door node
    Configuration details at
http://www.dcache.org/manuals/experts_docs/firewall.html