gridKa plans for setting up SRM 2.2

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http://gridka.de

dCache 1.7 headnode

dCacheh1

dcap

dirDomain

utilityDomain

lmDomain

dCacheDomain

Admin-door

httpdDomain

StatisticDomain

xrootdDomain

gPlazma

gridka-dCache.fzk.de

gLite-SE

srmDomain

InfoProvider

SRM Postgres DB

F01-015-103

Billing DB

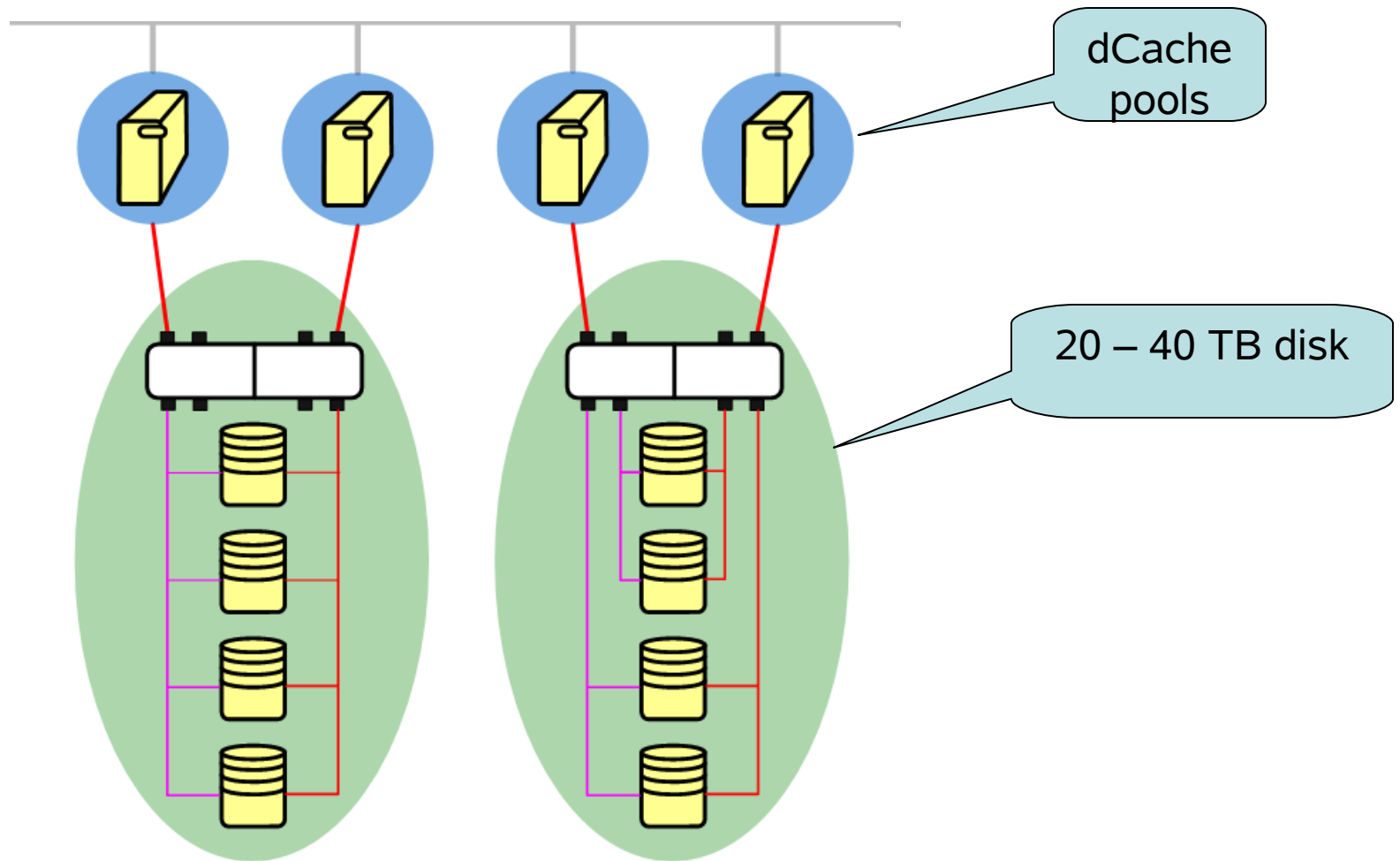SRM Watch

F01-015-111

pnfsServer

Postgres DB

pnfsManager

Companion DB

Storage Pools (today 240 TB)

dCache pools

20 – 40 TB disk

A (T1D0): RAW Files

- Input Write Buffer for raw data (select via routing)
- Sizes according to expected input stream
- separate set of pools
- dual location

B (T1D1):

- Input and output buffer for T1 and T2 inter-traffic (e.g. AOD from T2, replicas to T1)
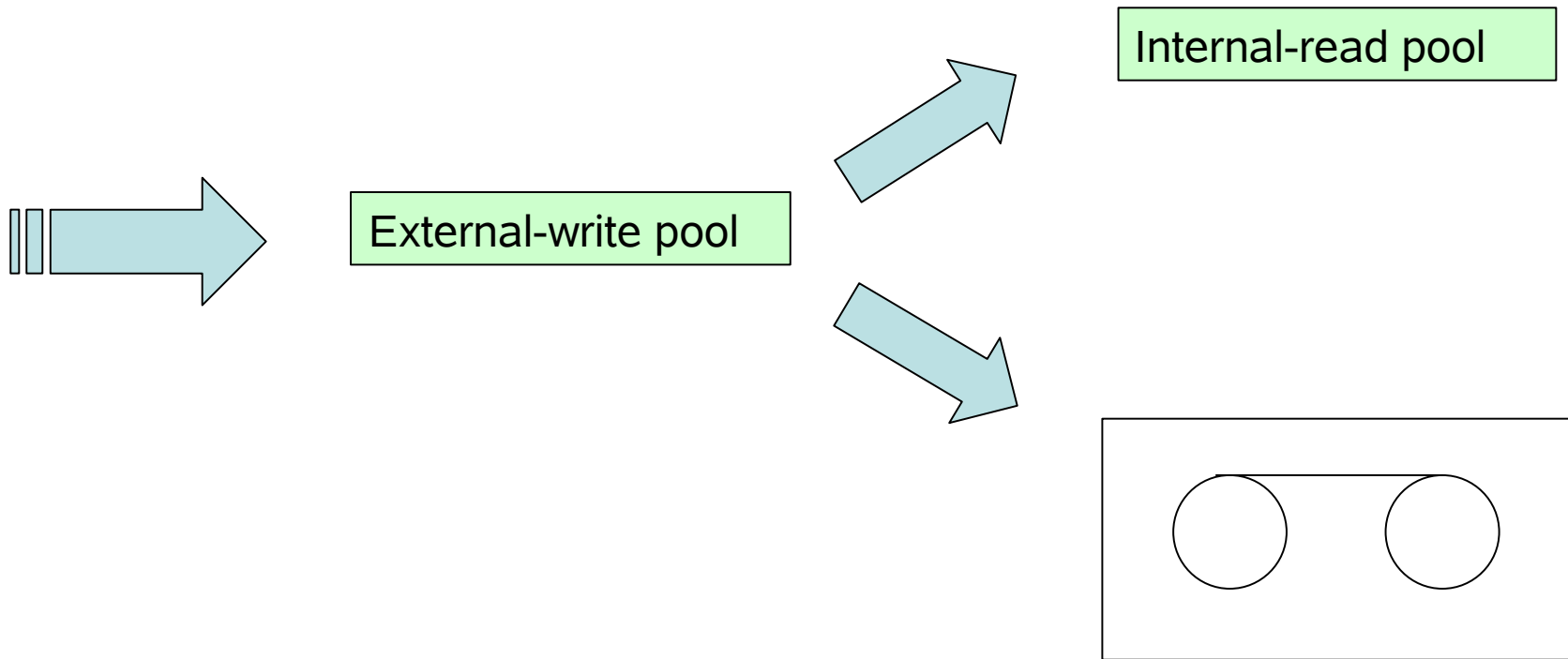
C (T0D1):
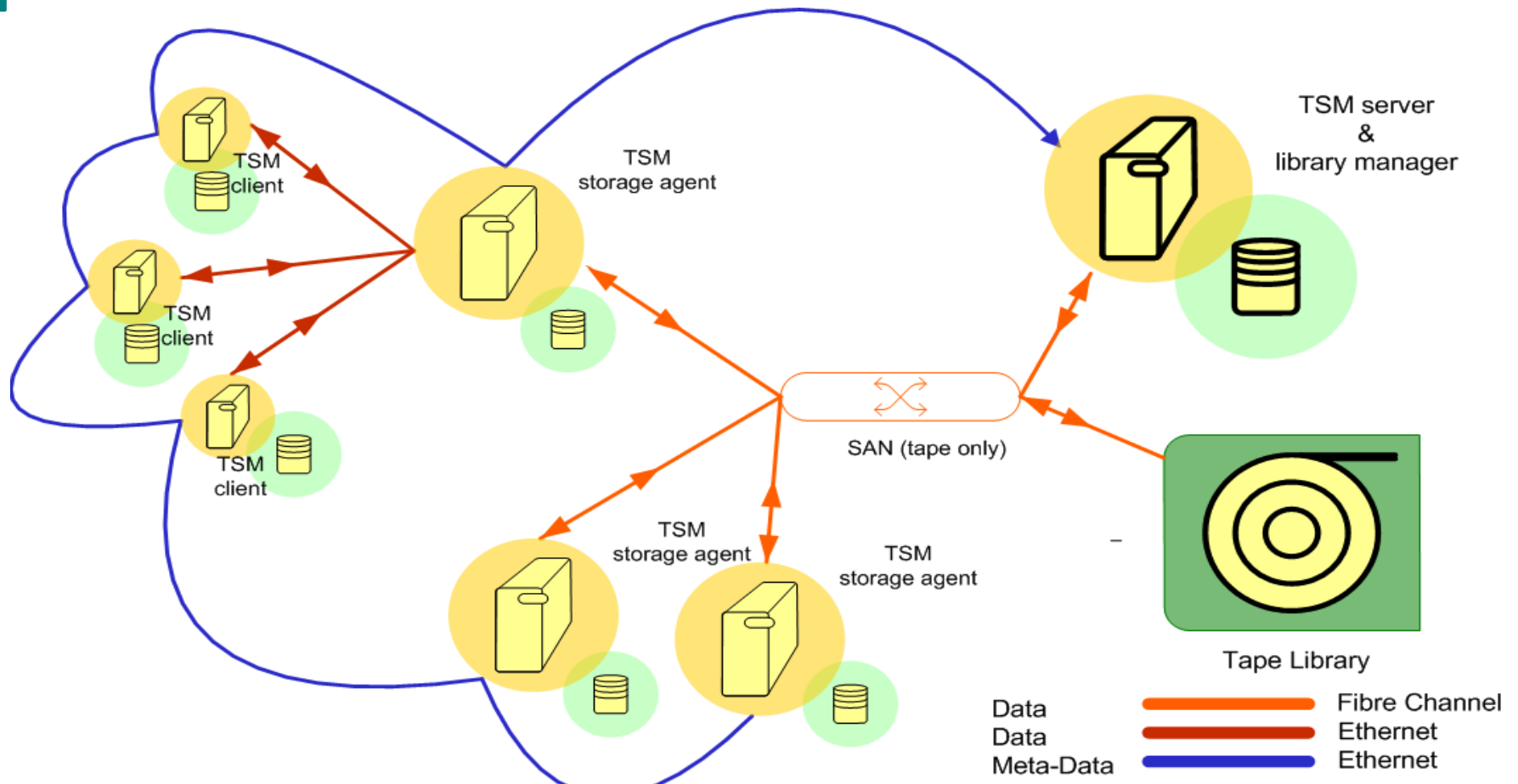
- Disk only
- Selected via path in dCache.

D (T1D0):

- locally produced data for which we are custodian. Amount unclear but low tape demand.

Input buffer for RAW files

Internal-read pool

External-write pool

TSM client

TSM client

TSM client

TSM storage agent

TSM server & library manager

SAN (tape only)

TSM storage agent

TSM storage agent

Tape Library

Data		Fibre Channel
Data		Ethernet
Meta-Data		Ethernet

Storage Agent | TSS | dCache

Pool properties

- Pools that receive data (write pools) have FC disks and a direct connection to tape via FC

- Pools that send data (read pools) have SATA disks and connect to tape via tape storage groups of 4 to 5 pool nodes

Unresolved

- Large disk spaces (we now have pools all over the place)
- 10 Gbit on servers (that's the complete LCG MOU throughput of GridKa on 1 single machine!!) (in theory)
- Deleting data, Moving data
- Pool configuration and moving types
- Firewall Issues
  - SRM transfers from workernodes have to go through our firewall

- 2nd dCache instance?

  disk-only / tape connected

- disk-only pool failover

- available space (disk and tape) must be reported correctly
  - du <path> reports incorrect data
  - 'gap' space in dCache
  - how large is tape space

- recovery of pnfs DB