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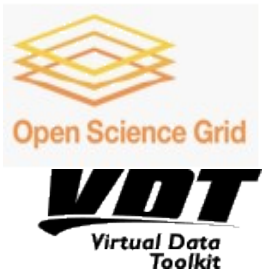
dCache 1.8 brief update

Patrick
for the dCache Team

support and funding by



Deployment : You should know (FAQ)

dCache 1.8 is a prerequisite for SRM 2.2

dCache 1.8 runs SRM 1.1 and SRM 2.2 at the same time

dCache 1.8 can be installed w/o necessarily using SRM 2.2

After the 1.8 upgrade, SRM 2.2 bug fixes will not be intrusive

Upgrade Procedure from 1.7 to 1.8 (about pool repository)

NO CONVERTION NEEDED

Neither for data files nor for control meta data files

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dCache 1.8 deployment schedule

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Week of

Oct 29	Nov 5	Nov 12	Nov 19	Nov 26	Dec 3	Dec 10	Dec 17
NDGF	gridKa	WS Edinburgh	(SARA)	IN2P3	RAL	BNL	PIC

Nov 6

Nov 13/14

not approved yet

* FERMIlab/ USCMS waits for resilient manager integrated into 1.8 (beginning of Nov)

* Triumf will let us know soon.

Please note :

* This table does not replace a proper announcement of your SE downtime.
* Any site may change their plans at any time without telling dcache.org

News (Management level)

New (temporary) workload adjustment

* SRM, gPlazma, resilientManager : Fermilab
* CORE dCache : DESY, NDGF
* use support@dcache.org for all issues
* use srm-deployment@dCache.org for SRM 2.2 PPS issues

SRM 2.2 deployment workshop in Edinburgh (Nov 13/14)

Special Tier I dCache session Tuesday Nov 13 morning

Workshop is organized by Greig and Flavia

Fermilab SRM 2.2 developers will be present

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News (Management level)

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dCache development & deployment under close weekly review

dCache developers & (optionally) dCache Tier I & Flavia

Reports from dCache, CASTOR, DPM & Jamie & dCache Management

MB

We are doing well and we are within our internal and WLCG planing.

We are fixing new issues as they pop up on Flavias pages.

After the fix with 'T0D1 return of removed space' *issue, no disagreements any more on SRM 2.2 interpretation.*

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Upgrade procedure to 1.8 simplified

Other than announced earlier, it won't be necessary any more to convert control data on the pools when upgrading from 1.7 to .1.8.
A bit of a drawback :
Starting a pool after an upgrade from 1.8.0-18 to higher on your PPS may take awhile, because it does "on the fly conversion". This is necessary to have the 1.8 format similar to the legacy 1.7 control file format.

Pnfs doesn't need to be mounted on the HSM write pools

You may enable this feature any time after the upgrade to 1.8, but
Make sure, your HSM connection script doesn't send anything to STDOUT. Find details on the dCache wiki :

trac.dcache.org -> documentation by dcache.org -> Optional new interface to HSM

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Pool Repository database on pools instead of small control files

* Developed by NDGF and DESY
* Phase I : speed up pool startup especially with zfs and gpfs.
* Phase II : reduce the memory consumption in pools (many files in pools)
* Is optional (default is still 'well known' control files)
* NDGF will be guinea pig (Oct 29)

Remaining urgent issues

srmStatusOfGetRequest, srmStatusOfPutRequest, even after being successful, changes to aborted after Abort is executed.

Remaining non urgent issues

File is shown (though LS) as Nearline, even if the BringOnline temporarily changes nearline file state. - not a high priority.

Space reservation with retentionpolicy=REPLICA and unspecified accesslatency resolves in reservation of CUSTODIAL-NEARLINE type of space when the access latency optional parameter is not specified. Caused by usage of default AL and RP if either one is not specified, Fixed in code, will be avail in the next release.

*srmPrepareToPut rturns SRM_NO_FREE_SPACE if space is expired, should return *SRM_FAILURE at file level and SRM_SPACE_LIFETIME_EXPIRED at request level, fixed in code, will be available in the next release.

An *srmPrepareToPut* or an *srmStatusOfPutRequest* returns SRM_FAILURE at file and request level if no space of the requested class is available instead of returning SRM_NO_FREE_SPACE at file and request level or SRM_INVALID_REQUEST at request level and SRM_FAILURE at file level. We think this is fixed, need testing.

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Upgrading your PPS to 1.8-19 (most recent)

Starting a pool after an upgrade to 1.8.0-19 to higher on your PPS may take awhile, because it does "on the fly conversion". This is necessary to have the 1.8 format similar to the legacy 1.7 control file format.

Please check our web pages for the improvements, release notes of 1.8-19

There will be more beta versions coming before the production system is available.

High frequency of releases just following the fixes of Flavias pages. (No official release cycles in 1.8 beta)

SRM 2.2 (The space token)

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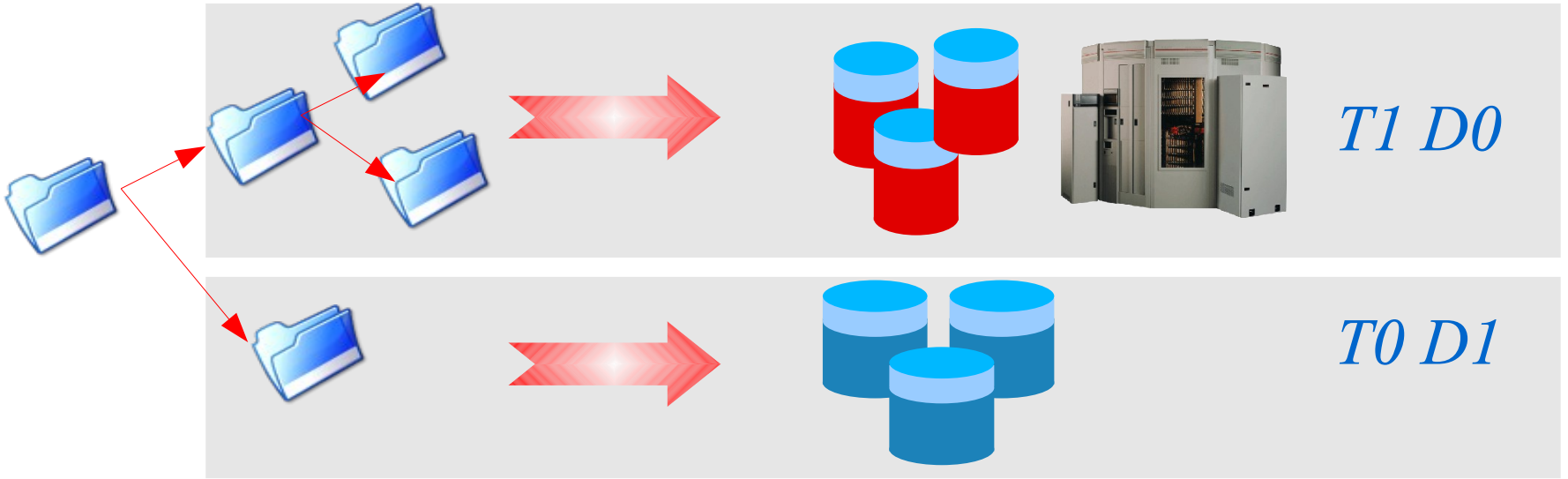
As it used to be (<= 1.7)



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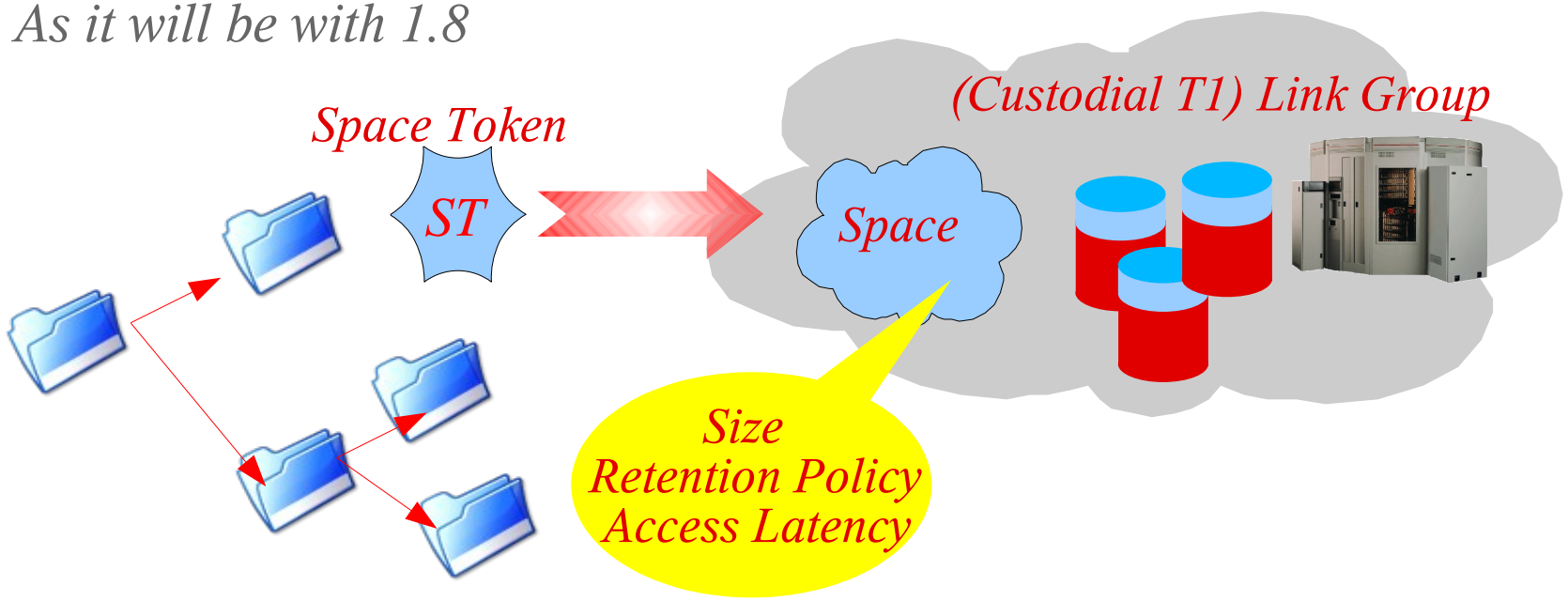
As it will be with 1.8



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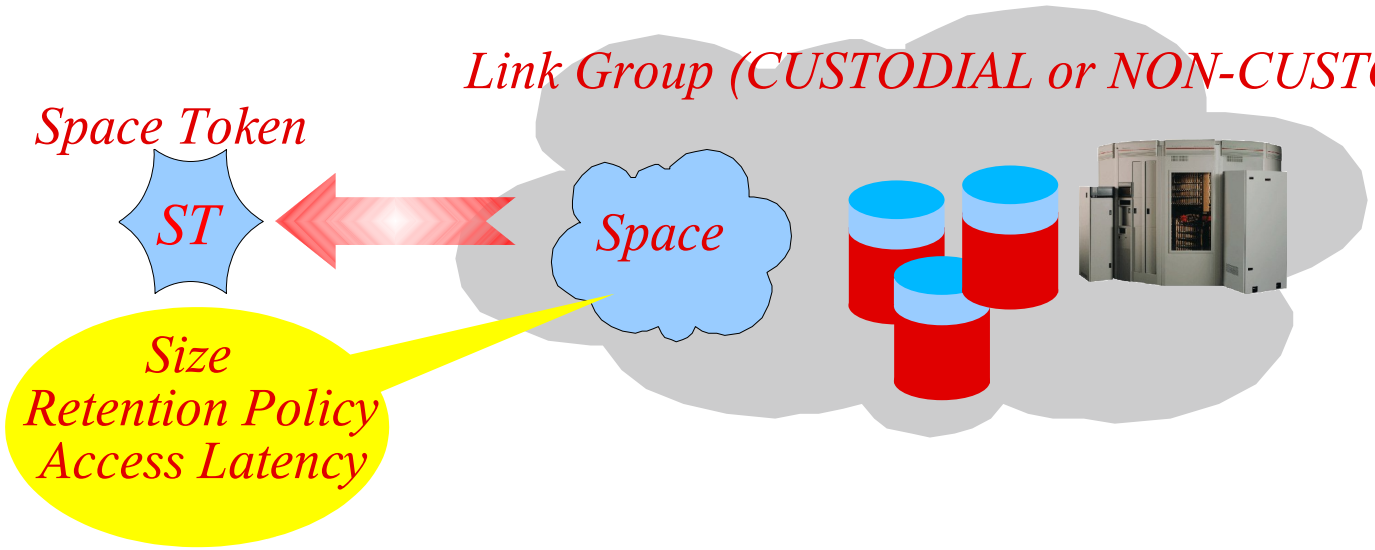
1. Step : Reserve Space results in a (implicit/explicit) Space Token



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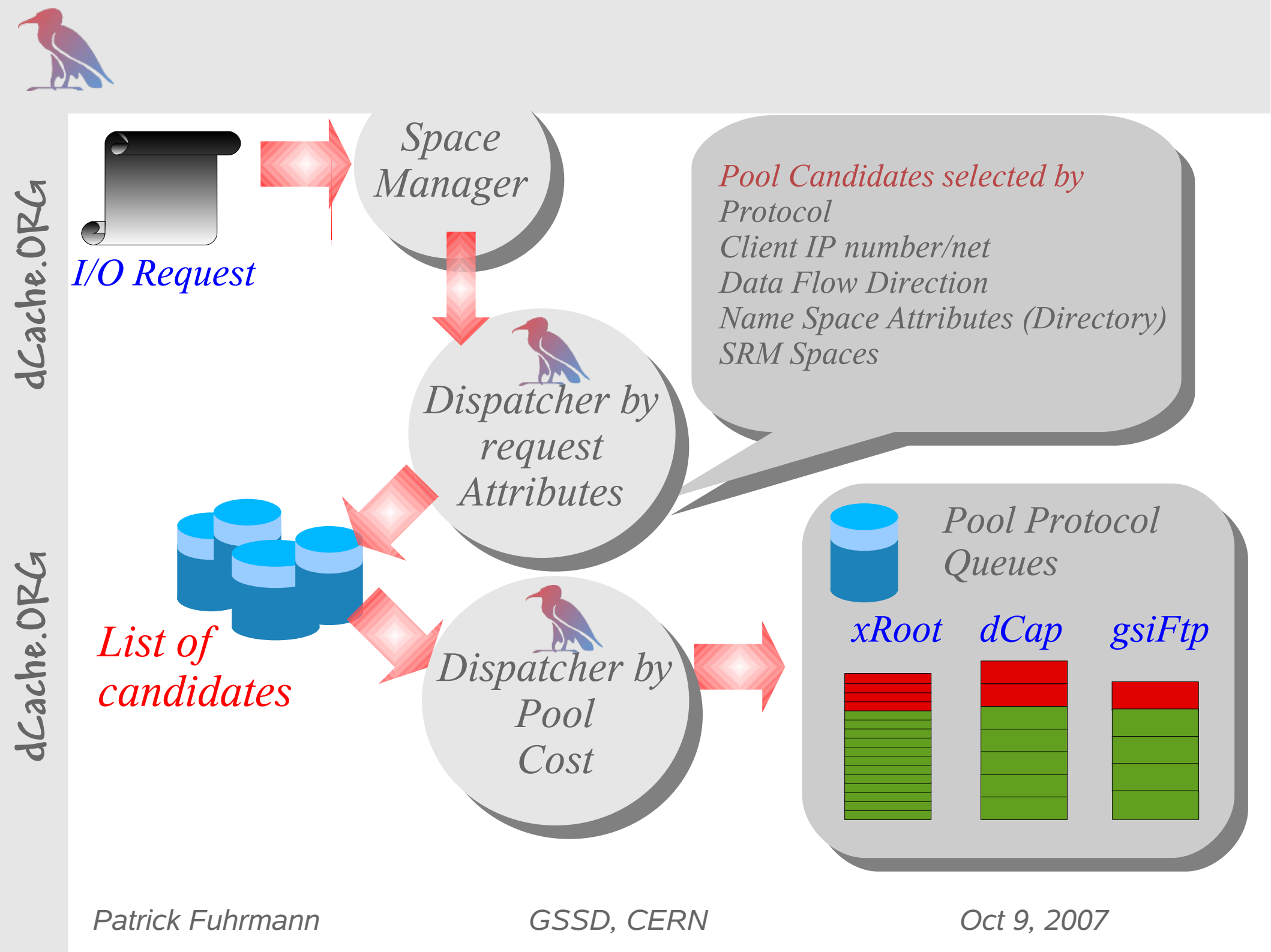
2. Step : do the PUT request with space token in addition to well know attributes

Pool Candidates selected by
Space Token
Protocol
Client IP number/net
Data Flow Direction
Name Space Attributes (Directory)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I/O Request
Space Manager
Pool Candidates selected by
Protocol
Client IP number/net
Data Flow Direction
Name Space Attributes (Directory)
SRM Spaces
Dispatcher by request Attributes
List of candidates
Dispatcher by Pool Cost
Pool Protocol Queues
xRoot
dCap
gsiFtp

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Further reading

www.dCache.ORG