

SRM-DCACHE ITB Service Integration Plan

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Success Conditions

- **<talk>** SRM-dCache is not ready for general deployment on Grid3dev/OSG for ITB 0.1.0. No install scripts today. **</talk>**
- ;^)
- Success 1: SRM-dCache deployed, working at US-CMS Tier-1, Tier-2 sites.
- Success 2: Inter-operability of SRM-dCache with other SRMs (SRM v1.1)
- Plan: SRM-dCache ready for next ITB.

Service Description

- SRM-dCache: SRM as a “door” to dCache
 - SRM v1.1 interface + some SRM v2 features
 - Distributed disk storage with or without MSS
- Min: 1+ “admin” server, 0+ file servers
- CDF dCache: in production for ~ 2 years
 - 5 admins, 65 file servers, 6 “sub-caches”
 - 160 TB total, up to 60 TB/day to clients (real).
- US-CMS Tier-1 will exceed this scale.

Installation, Configuration

- RPMs available from www.dcache.org
- US-CMS/Fermilab experts rolling their own
 - Rapid develop and re-deploy cycle nowadays
- Not yet integrated with PacMan, VDT
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- Most config via text files, could be easier
- Install/config challenge: networking issues
 - Private networks, NATs, internal firewalls
 - Site firewalls, local policies and restrictions

Service Status

- CMS Tier-0 to US Tier-1 robust data transfer challenge successful.
 - 500 MB/sec for days w/o intervention
- 7 Tier-2 SRM-dCache deployments
 - San Diego (installed), Florida (installing)
 - Wisconsin (installed?), CalTech (begun)
 - Also on list: Purdue, Nebraska, MIT
- Interoperability: SRM-dCache with...
 - SRM-Castor by FNAL & CERN, Wisconsin

Interoperability

- Client A/B talks to Service B/A... obviously.
- File SURL must be interchangeable; that is what is put into a “global” database
 - SRM-Castor SURLs “point to” service
 - SRM-dCache SURLs pointed to service WSDL
 - Overlooked because WSDL happened to be installed in same location on both services.
 - Wisconsin (Nate Mueller): tried to interchange Castor & dCache SRM meta-data, and **no go**.
 - SRM-dCache SURLs now point to service

Next Steps

- Continue the US-CMS Tier-2 deployment
- Robust data transfer $T0 \leftrightarrow T1 \leftrightarrow T2 \leftrightarrow T2$
- VO Authorization Module integration work: GUMS-like svc for dCache user “paths”.
- MIS: schema to support multi-VO sites.
- Install/config: simpler, “standard” configs
- Adapt to OSG deployment model
- ITB readiness estimate - late Spring 2005

Documentation

- <http://www.dcache.org>
 - dCache web home
- <http://grid.fnal.gov>
 - Fermilab Grid projects: dCache, SRM, OSG...
- <http://www-isd.fnal.gov/srm>
 - Fermilab SRM project page: for developers
- <http://sdm.lbl.gov/srm-wg>
 - SRM working group page
- OSG TG-Storage: For status, plans, etc.