

An Analysis Scenario for STAR using SRM Technology



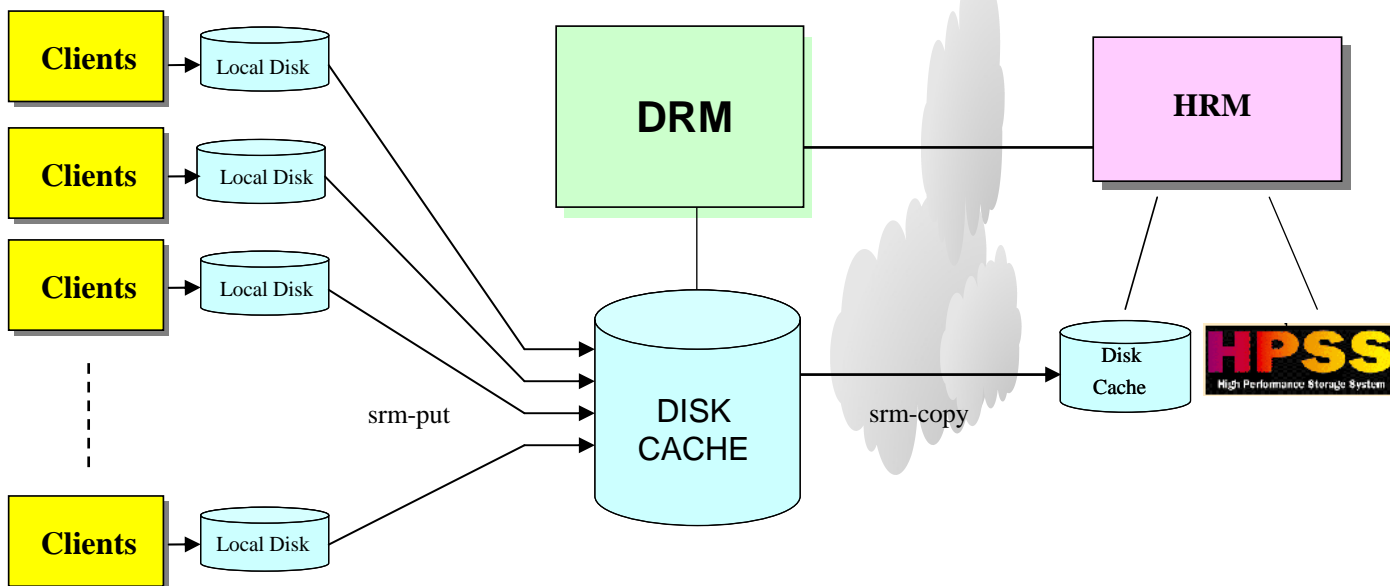
The grid-based analysis computing framework of the STAR experiment is based on the STAR Unified Meta-Scheduler (SUMS) which in turn relies on condor-G to send jobs to remote sites. When jobs complete the output files need to be **transferred** to the site from which they were originally submitted **in a scalable, managed and coordinated fashion** as each output may be large (2 GB) and many jobs could finish simultaneously from disjoint sites distributed world-wide. Storage Resource Manager (SRM) technologies are in use in STAR to address these issues.

The method utilizes a 2-step transfer between Disk Resource Manager (DRM) servers running at each site. The first transfer is a local transfer (srm-put) from the remote worker node into the disk cache of the remote DRM. The second transfer (srm-copy) is from the remote DRM back to the original submission site. Advantages of this method include SRM management of transfers to prevent gatekeeper overload, delegation of the second transfer to the DRM server thereby decoupling computation and data transfer, and seamless mass storage access if HRM's are used.

Worker Nodes

Remote Gatekeeper

Submission Site



1. Grid job runs on WN, results saved on local disk
2. Request a space on DRM cache to put the result
3. Copy the result into the designated DRM space
4. Request copy back to the submission site

5. Reserve a space in disk cache
6. gsftp file transfer into the local disk
7. Release the remote file
8. Archive to HPSS

**For details and demos:
please visit the LBNL booth**

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