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How to access AGATA event data stored on the GRID

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AGATA GRID archive

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Archiving of AGATA event data on the GRID

- Data will be archived (long term storage) on the GRID
- Storage sites: INFN-CNAF Tier-1 in Bologna and possibly also CC-IN2P3 Tier-1 in Lyon (for redundancy)
- Data will be archived on tapes
- Staging hard disks will be used to speed up the access to the data
- The present aim is to pay the costs of the archive (mainly tapes) by AGATA running costs

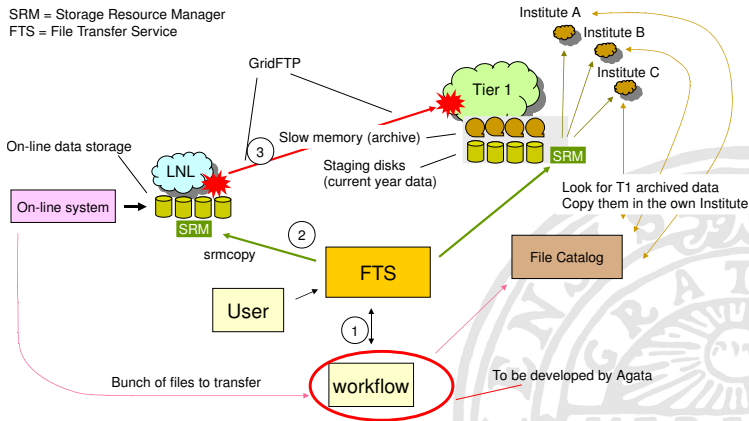


GRID Data Mover

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A complete GRID Data Mover

SRM = Storage Resource Manager
FTS = File Transfer Service



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Slide by G. Maron (INFN-LNL) shown at the AGATA Week at LNL, 2007



Requirements for user access to the archive

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Requirements for download of data from the archive:

- 1 Valid GRID certificate (authentication)
- 2 Registered user in the AGATA Virtual Organization (authorization)
- 3 Client for copying data from the AGATA GRID Archive





1. GRID Certificate

How to get a GRID certificate:

- You need a certificate (X.509) to authenticate (make your identity known) yourself to services, hosts and other users in the GRID environment
- Certificates are issued by a GRID Certification Authority (CA)
- Each country (or region) have their own CA
- Map with link to CA:s in Europe:
<https://www.eugridpma.org/members/worldmap/>
- Apply for a certificate in your home country
- Good instructions for this are available at the CA:s web sites
- Mention that you will be a member of the AGATA VO



2. AGATA Virtual Organization (VO) membership

Register as a user of the AGATA VO

- To access the AGATA GRID resources you need authorization for these specific resources
- This is obtained by becoming a member of the AGATA VO
- Visit
<https://cclcgvomsl101.in2p3.fr:8443/voms/vo.agata.org/>
and follow the instructions for the registration
- Note: You cannot access this site before you have imported your personal GRID certificate in your web browser



2. Clients for data transfer

clientSRM

- Simple guide written by P. Molini:
http://csngwinfo.in2p3.fr/mediawiki/index.php/SRM_StoRM

Java-based client

- Developed by P. Molini (not ready yet)
- Primarily for transfer AGATA online storage → GRID archive
- Will probably be integrated into the AGATA RunControl

NorduGrid ARC middleware

- Source, binaries (RPM), and documentation can be downloaded from <http://www.nordugrid.org/>

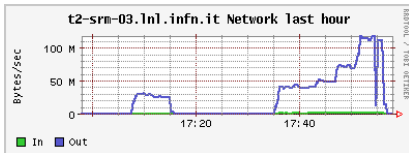
A number of other clients are also available...



Tests of transfer rates

P. Molini (INFN-LNL), Oct 2008

- Transfer: Disk array of the AGATA DAQ system at LNL → hard disk storage at INFN-CNAF Tier-1 in Bologna



Max 120 MB/sec; limited by Gbit link between INFN-LNL and INFN-CNAF

JN, Nov 2008

- Transfer: INFN-CNAF Tier-1 in Bologna → laptop in Uppsala
- Client: NorduGrid command line program `ngcp`
- Max 10 MB/sec; limited by 100 Mbit LAN in Uppsala (10 MB/sec \approx 1 TB/day)



In-beam data from week 12

In-beam commissioning experiment data soon on the GRID

- 14 TB of event data were collected during the in-beam commissioning experiment 16-22 March 2009
- Data will soon be transferred to the GRID (INFN-CNAF)
- AGATA VO members may download the data from there

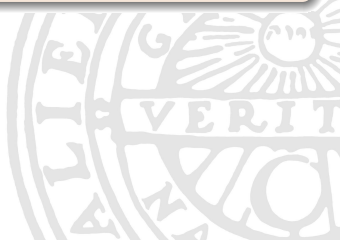




Access permissions

Access permissions of the AGATA GRID archive

- Should all the data stored in the AGATA GRID archive be accessible by all registered AGATA VO users? Default.
- Or should we implement some access control rules by which e.g. the spokespersons of each experiment selects who can access the data?
- A policy regarding access control should be decided soon





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Getting stuck?

Help and advice regarding access to the AGATA event data stored on the GRID will be posted at

<http://www.agata.org/grid/>

