



Enabling Grids for E-scienceE

BAR Use Cases

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- **Re-evaluate the use case identified in the SA2 document,**
 - <https://edms.cern.ch/document/476742>
- **Note that the use cases are divided into,**
 - Replica Management
 - Interactive Job Submission
 - Bio-Medical
 - Earth Observation ?
- **Consider the following use cases and identify who performs the**
 - SR
 - SA

- **Use Case 3.4.1: A Tier 1 Site retrieves raw data from the LHC**
- **A Site Data Distribution Service reserves bandwidth from CERN (same as LHC?) to the site to ensure all data files are transferred on time.**
- **The actual transfer itself may be done by another service**
- **I.e., it is highly likely the SA is done by an independent service.**
- **Actor: Data Manger**

- **Use Case 3.4.2: User submits a job to run on the Grid**
 - Who are the BAR users
 - Resource Broker
 - The Job ?
 - Who uses
 - SR ? & SA ?
- **Use Case 3.4.3: X requests a logical file to be transferred to an SE**
 - Appears to be the general case of Use Case 3.4.1
- **Use Case 3.4.4: X requests that a physical file be transferred to an SE+**
- **Can we support these ?**

- **Use Case 3.5: A site transfer service schedules a time period in which file transfer should take place → SR**
 - Service passes the parameters
 - file source/destination
 - latest arrival time
 - earliest pickup time
 - any bandwidth limitation
 - Ensure VO does not exceed any limits – who (BAR) ?
 - KK: BAR does it as it “told”
 - Detail is passed to another service (S1) which performs the physical transfer → SA

- **Are there use cases for Replica Management where a human make a SR via a client application on behalf of HLM ?**
 - E.g., regular large data cross site data replication

- **File transfer**
 - No actors are identified.
 - Require transfer of large file – even with compression.
 - Confidentiality is also required.
 - How does BAR guarantee confidentiality? → contains a flag to indicate this
 - What about encryption ? Not up to BAR -> up to HLM
 - It could be argued that medical Grid middleware applications should be allowed to reserve the file transfer (SR) and perform the transfer itself (SA).
- **Interactive sessions for analyzing remote Images**
 - Actor -> Doctors
 - Radiological image processing
 - Human supervise medical image analysis

- **Are there any limitations in our architecture to satisfy these Use Cases?**