



Enabling Grids for E-scienceE

## CREAM2 architecture

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- **Major redesign and restructuring in CREAM software**
- **We use to call “CREAM2” this new CREAM software release**

- **Why CREAM 2?**
  - to solve some performance and scalability issues
    - in particular: proxy renewal and job lease operations
      - *see CE checkList, task 4.10*
    - older implementation not efficient and scalable
    - new redesign of CREAM back-end was needed
      - *now based on relational DB (MySQL)*
    - revision and optimization of the CREAM interface (WSDL)
    - old interface preserved just to fasten testing
- **The new development on CREAM service have been basically finalized**
- **Certification process must start soon**

- **CREAM as general purpose command executor**
  - the old CREAM provides only functionality for the job management
  - the CREAM capability (commands) are now pluggable
  - we provide a plug-in (Executor) for the job management
    - the BLAHExecutor based on BLAH
    - note: the concept of job exists just contextually with the job management plug-in and it is out of scope of the cream core
  - new capabilities can be added/plugged
    - E.g. CREAM to access a DB
  - support for synchronous and asynchronous command execution
    - the asynchronous commands are inserted on a priority queue associated to a specific command category (i.e. job management, db)
      - *Two queue implementation provided*
        - based on database (i.e. MySQL)

- **CREAM2 will be able to publish several and different WSDL interfaces at the same time**
  - every interface is associated to a specific command category (i.e. job management, db, etc)
  - at the moment we provide 2/3 interfaces for the job management
    - the old interface and the new one (legacy)
    - the BES interface being developed by the OMII-EU project
  - generic interface for command execution planned
- **CREAM2 has a new core completely redesigned**
  - written in Java
  - is not bounded on a specific Web service framework for Java (i.e. Axis)
- **Security stuff not changed**
  - X509, VOMS, TrustManager, Delegation Service etc



