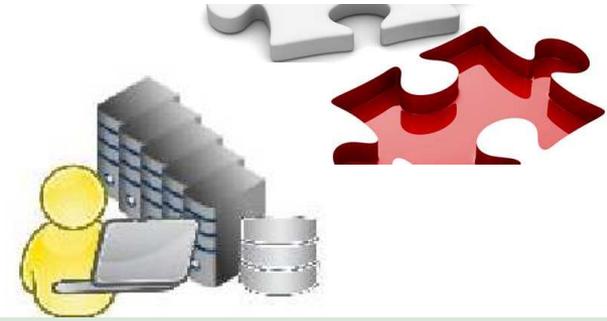


Grid Glossary



Glossary



- **Job:** a program that will run somewhere on a Grid machine.
- **JDL (Job Description Language):** describes job, parameters and requirements.
- **In/Output Sandbox:** Input Sandbox defines any names of the files we wish to upload. Output Sanbox contains filenames of data we wish to retrieve after the job is done.
- **UI (User Interface):** your access point to the Grid. From here you submit the jobs and retrieve logging information.
- **CE (Computing Element):** is the interface to the cluster. Accepts jobs via a batch system (LRMS) and dispatches them to a collection of site Worker Nodes. The jobs are submitted by the users either through a WMS or directly.
 - ✓ **LRMS (Local Resource Management System):** it is the batch system on a CE
- **WN (Worker Node):** the machines that do the actual work & execute jobs.

Glossary



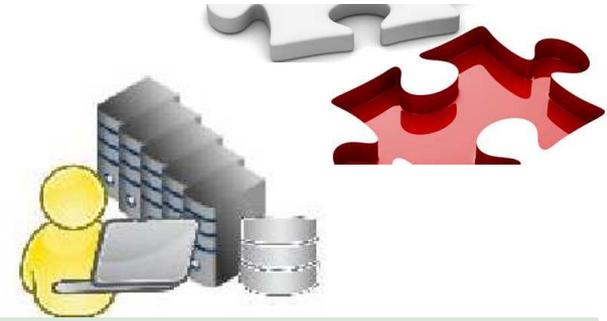
- **SE (Storage Element):** is a Grid component where files can be stored. The protocol used for file transfers is GSIFTP. At least one SE per site.
- **SRM (Storage Resource Management):** manages the storage resources. It is a middleware service providing capabilities like migration from disk to tape. Various implementations like DPM, dCache, CASTOR, StoRM.
- **File locations:**
 - ✓ **GUID (Grid Unique Identifiers):** the identifier assigned to an uploaded file to Grid
 - ✓ **LFN (Logical File Names):** a generic file name. This is assigned to a file directly by the user
 - ✓ **SURL (Site Unique Resource Location):** physical location of a file on the Grid (disk or tape)
- **LFC (Local File Catalog):** it is a database that holds a mapping to associate LFN, GUID, SURL and replicas. A generic file name (LFN) has an identifier (GUID) and this filename is mapped on to one or more physical locations on the Grid (SURL).

Glossary



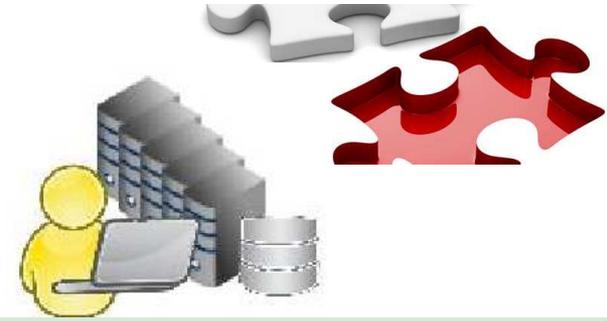
- **WMS** (Workload Management System): distributes and manages tasks across computing and storage Grid resources.
- **LB** (Logging and Bookkeeping service): collects events from many WMS components and records the history of the job.
- **gLite**: middleware software for Grid Computing. It provides a framework for building distributed computing and storage infrastructure across the internet.
- **IS** (Information Service): supplies information about status of grid resources. Grid uses the published information for its core operation, monitoring and accounting.
 - ✓ **BDII** (Berkeley Database Information Index): it is an LDAP-based information system which holds information about all services available on the grid.

Glossary



- **GSI (Grid Security Infrastructure):** uses public key cryptography (or asymmetric cryptography) to enable secure authentication and communication over an open network. GSI is based on:
 - ✓ **X509:** digital certificate. Users are authenticated to the Grid with a digital X.509 certificate. It is issued by a Certification Authority (CA), which is trusted by the infrastructure running the middleware.
 - ✓ **SSL (Secure Sockets Layer):** communication protocol for secure authentication with extensions for single sign-on and delegation.
- **Proxy:** a short lived temporary certificate which is used for the actual authentication to Grid services.

Glossary



- **CA** (Certification Authority): Signs the certificates to certify your identity. Those who trust the CA, trust you.
- **RA** (Registration Authority): is a local authority that signs your request form for a Grid certificate and verifies your identity.
- **VO** (Virtual Organization): is a user community with geographically distributed people that have common objectives or projects.
- **VOMS** (VO Membership Services): handles authorization of resource access, based on the VO membership of the user.