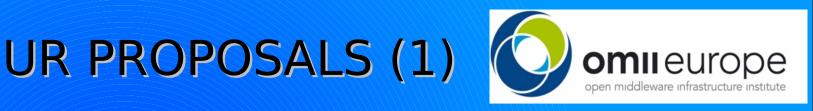




PROPOSALS FOR THE SECOND VERSION OF THE UR SPECIFICATION

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- Many large Grid communities (LCG, OSG, ...) require information on the User VO! ProjectName is semantically different ...
- Several LCG VOs need more detailed information on groups and user roles within the VO (FQAN = Fully Qualified Attribute Name)!
- Proposal: VO and FQAN as parts of a user's identity

```
<UserIdentity>
  <LocalUserId>...</LocalUserId>
  <VOName>cms</VOName>
  <UserFQAN>/cms/production/Role=Admin,...</UserFQAN>
</UserIdentity>
```





- Usage records need to be associated to Grid user IDs (DNs), Grid job IDs and Grid resource IDs (e.g. Globus contact string).
 - Grid resources may be logical entities (e.g. LCG CE IDs: "t2-ce-01.to.infn.it:2119/jobmanager-lcglsf-cert"). MachineName, Queue and Host are not enough ...
- SiteName and LRMS type would be useful.
- Proposal (in analogy to UserIdentity and JobIdentity):

```
<ResourceIdentity>
  <GlobalResourceId>t2-ce-01.to.infn.it:...</GlobalResourceId>
  <SiteName>INFN-TORINO</SiteName>
  <Queue IrmsType="LSF">cert</Queue>
  <MachineName>Tier2-Cluster-Torino</MachineName>
  <Host>wn17.to.infn.it/Host>
</ResourceIdentity>
```





- The measured resource usage of a job depends heavily on the performance of the executing resource.
- How to compare usage records from heterogeneous resources across the Grid? Normalization of resource usage is one of the important issues in multi-organizational environments that are interested in fair share.
- 1 sec CPU time ≠ 1 sec CPU time !!! (for two different processor performances)
- Proposal: add performance information to ResourceIdentity

```
<ResourceIdentity>
  <Performance units="SpecInt2000">...</Performance>
  <Performance units="SpecFloat2000">...</Performance>
</ResourceIdentity>
```



UR PROPOSALS (4)



- We should go beyond job usage and think about other resource usage!
- Storage accounting, for example, is one of the big upcoming issues ...
- Proposal:
 - JobUsageRecord = UsageRecord + JobIdentity
 - StorageUsageRecord = UsageRecord + FileIdentity

```
<StorageUsageRecord>
    <UserIdentity>...</UserIdentity>
    ...
    <FileIdentity>...</FileIdentity>
    ...
</StorageUsageRecord>
```





- Users might be charged not only for consumed resources, but also for requested/reserved resources.
- Should it be possible to specify resource requests in the same Usage Record?
- Possible approach: additional attribute?

```
<Disk usage="consumed">...</Disk>
<Disk usage="requested">...</Disk>
<Network usage="consumed">...</Network>
<Network usage="requested">...</Network>
(default should be "consumed" for backward compatibility)
```