**UMD – A Discussion on Scope and Content**

**Steven Newhouse, 22nd April 2009**

**Introduction**

The purpose of this document is to establish some principles in the scope of UMD and some strategies for selecting its content. This is being done in advance of the next UMD meeting to be held at CERN towards the end of April 2009 in order to facilitate the discussion and provisional selection of components for UMD. This discussion will be based on the information collected and synthesised by the Technical WG. The main outcome of this meeting will (hopefully) be a definition of the provisional scope and content of UMD.

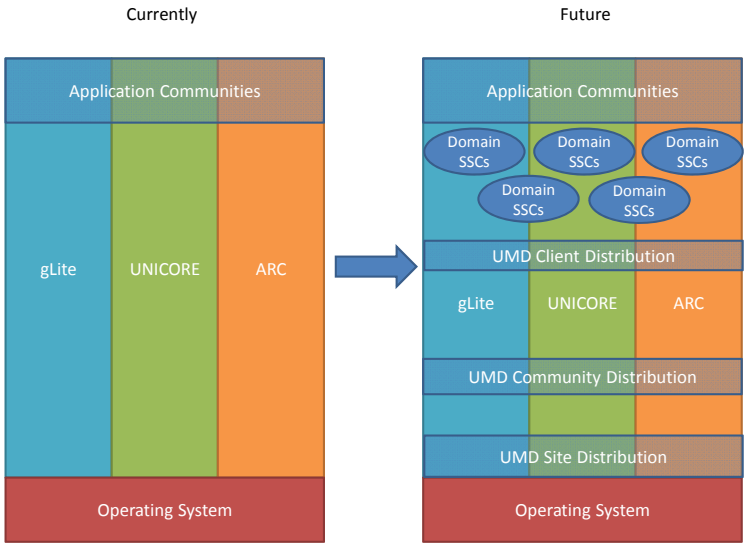
**What is UMD?**

A detailed discussion of UMD and the process by which components are integrated into a release from different software providers is provided elsewhere [UMDProcessDocument]. Our purpose here is to discuss and define the capabilities that we wish to consider as part of UMD and those capabilities that we see as being outside its scope.

**Working Together**

The ARC, gLite and UNICORE software providers have taken different approaches to developing software and working with their different research communities. They have provided solutions to different use cases and have different philosophies as to how their software should be used to satisfy these use cases. Despite all of these differences there is much that is common between the providers that can be harnessed for benefit of the broader European research community, while allowing each provider to retain its unique interactions with their respective user communities.

The move towards EGI will provide greater opportunities to work together. The focus of this document is to explore collaborative opportunities around the UMD release itself provided through EGI for its user community. Current and future collaboration possibilities are shown in the following figure:




Three areas are proposed for UMD collaboration:

- UMD Site: Released software elements used to provide a set of functional capabilities for a site (e.g. job submission, file access, information service, ...)
- UMD Community: Released software elements used to provide a set of functional capabilities for a community which may be run 'centrally' by that community to provide coordinate access to multiple services (e.g. file movement, workload management, VO management, information directory, ...)
- UMD Client: Released software elements that are needed by end users to contact UMD Site or Community services, and to provide a software libraries (i.e. an SDK) for application developers to build their applications

Note: The UMD Site/Community/Client flavours of the UMD distribution can be compared to workstation and server versions of Redhat.

The UMD Site/Community/Client distributions do NOT represent exclusive layers is an architecture stack – rather they provide defined functional capabilities where eventually there will be interoperable solutions, i.e. from a functional perspective it does not matter of an ARC or a gLite compute capability supporting the PGI standards is deployed. Until this convergence is achieved UMD will provide an integrated distribution of related software elements.

Engagement directly with application communities is seen as being outside of the scope of UMD, but allows the different software providers to collaborate directly with application communities through mechanisms such as the Specialised Support Centres (SSCs).

**UMD-Site**

The UMD-Site delivers the functional capabilities that would generally be deployed on a site:

| Functional Capability | Possible Software Components |
|---|---|
| Computing | ARC Grid Manager<br>gLite CREAM Service<br>UNICORE UAS, UNICORE TSI, UNICORE OGSA-BES |
| Data | ARC Classic SE<br>gLite DPM<br>UNICORE UAS, UNICORE UNIRODS<br>dCache |
| Information | ARC ISIS |
| Accounting | ARC Job Usage Reporter<br>gLite APEL |

**Comment [J1]:** Pick taxonomy terms that come from the Technical WG.

**Comment [J2]:** Decide which components within a taxonomy group we should aim for convergence.

**UMD-Community**

The UMD-Community delivers the functional capabilities that would generally be deployed to provide virtualised services access resources at several sites:

| Functional Capability | Possible Software Components |
|---|---|
| Computing | gLite WMS, gLite LB<br>UNICORE Workflow |
| Data | gLite LFC, gLite FTS, gLite AMGA |
| Information | gLite BDII<br>UNICORE Service Registry |

**UMD-Client**

The UMD-Client are the set of components needed to access services in UMD-Site or UMD-Community. It may also include additional components that are not part of UMD Site or Community:

| Functional Capability | Possible Software Components |
|---|---|
| Computing | ARC ng* JM CLI, ARC arc* JM CLI<br>gLite CREAM CLI, gLite WMS CLI<br>UNICORE Rich Client, UNICORE CLI |
| Data | gLite SRM Client, gLite FTS Client |
| Information | gLite SD API, gLite lcg-info, gLite lcg-infosites |