

DRMAA Working Group

Cochairs

John Tollefsrud [j.t@sun.com], Sun Microsystems

Hrabri Rajic [hrabri.rajic@intel.com], Intel

GGF9

Chicago, IL USA

Oct, 2003

First things first

- **DRMAA scope and purpose:**
 - Submit, control & monitor, and query status of jobs.
 - DRMAA concerned mainly with legacy environments and applications
- **Need two volunteers for taking this session minutes**
- **Sign-up sheet**
- **GGF IP policy**

Intellectual Property Policy



- I acknowledge that participation in GGF9 is subject to the GGF Intellectual Property Policy.
- Intellectual Property Notices Note Well: All statements related to the activities of the GGF and addressed to the GGF are subject to all provisions of Section 17 of GFD-C.1 (.pdf), which grants to the GGF and its participants certain licenses and rights in such statements. Such statements include verbal statements in GGF meetings, as well as written and electronic communications made at any time or place, which are addressed to: the GGF plenary session,
 - any GGF working group or portion thereof,
 - the GFSG, or any member thereof on behalf of the GFSG,
 - the GFAC, or any member thereof on behalf of the GFAC,
 - any GGF mailing list, including any working group or research group list, or any other list functioning under GGF auspices,
 - the GFD Editor or the GWD process
- Statements made outside of a GGF meeting, mailing list or other function, that are clearly not intended to be input to an GGF activity, group or function, are not subject to these provisions.
- Excerpt from Section 17 of GFD-C.1 Where the GFSG knows of rights, or claimed rights, the GGF secretariat shall attempt to obtain from the claimant of such rights, a written assurance that upon approval by the GFSG of the relevant GGF document(s), any party will be able to obtain the right to implement, use and distribute the technology or works when implementing, using or distributing technology based upon the specific specification(s) under openly specified, reasonable, non-discriminatory terms. The working group or research group proposing the use of the technology with respect to which the proprietary rights are claimed may assist the GGF secretariat in this effort. The results of this procedure shall not affect advancement of document, except that the GFSG may defer approval where a delay may facilitate the obtaining of such assurances. The results will, however, be recorded by the GGF Secretariat, and made available. The GFSG may also direct that a summary of the results be included in any GFD published containing the specification.

GGF Intellectual Property Policies are adapted from the IETF Intellectual Property Policies that support the Internet Standards Process.

Agenda

- **DRMAA status**
- **C Bindings**
- **Java Bindings**
- **Compatibility test suite**
- **Where DRMAA fits**
- **Security section discussion**

DRMAA status

- **Final edit of DRMAA recommendation document**
- **Reference implementations**
 - C bindings
 - Java bindings
 - WS or WSDL bindings
- **Compatibility test specification**

DRMAA C Bindings

• **Andreas Hass**

DRMAA Java Bindings

•Daniel Templeton

Compatibility Test Suite

• **Andreas Hass**

How is Related to Other Groups

•OGSA

- DRMAA oriented to legacy applications/environments, complementary to OGSA
- Could be using OGSA interfaces as just another DRM system
- DRMAA could be used as RM adapter
- DRMAA enablement “warm-up” to OGSA enablement

•JSDL

- DRMAA job attribute list extensive and agreed upon
- JSDL adapter

•GRAAP

- DRMAA job attribute list extensive and agreed upon



DRMAA Job Attributes

Mandatory job attributes:

- Remote command to execute
- Remote command input parameters, a vector parameter
- Job state at submission
- Job environment, a vector parameter
- Job working directory
- Job category
- Native specification
- Standard input, output, and error streams
- E-mail distribution list to report the job completion and status, a vector parameter
- E-mail suppression
- Job start time
- Job name to be used for the job submission

Optional job attributes:

- transfer files
- absolute job termination time
- wall clock time limit
- soft wall clock time limit
- job run duration hlimit
- job run duration slimit

DRMAA & OGSA

**Integration
Proposition**

**Value
Proposition**

**Supporting
Deliverable**

**OGSI
Client**

**DRMAA Apps MAY
integrate with OGSA**

**Maximum app
portability across
various distributed
computing
architectures**

**DRMAA OGSI client
mapping document**

**Program
Execution**

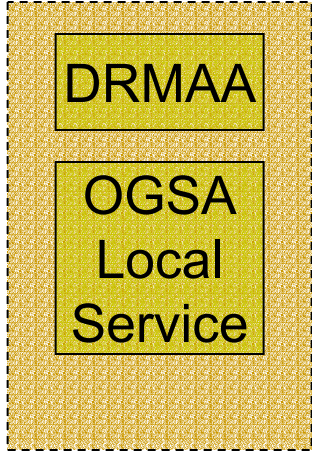
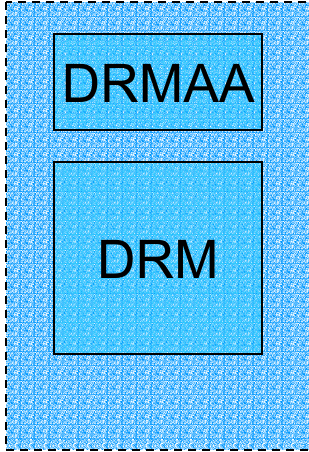
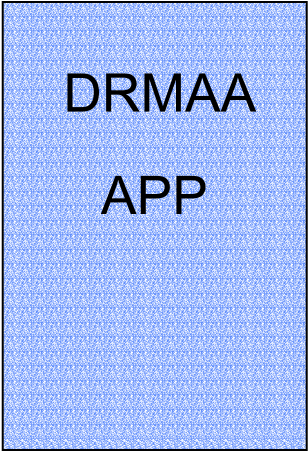
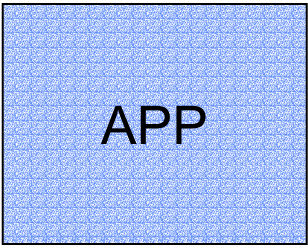
**DRMAA as an OGSA
RM Adapter**

**RM investment
leveraged for OGSA**

**DRMAA for OGSA
document**



DRMAA Application Portability



RM at
deployment

Single
Machine

Local Netw Sys's
Round Robin
Clusters
P2P

Service
Oriented
Grid



Security

- The scheduling scenario described herein presumes that security is handled at the point of job authorization/execution on a particular resource. It is assumed that credentials owned by the process using the API are used by the DRMAA implementation to prevent abuse of the interface. In order to not unnecessarily restrict the spectrum of usable credentials, no explicit interface is defined for passing credentials.

DRMAA Charter

- Develop an API specification for the submission and control of jobs to one or more Distributed Resource Management (DRM) systems.
- The scope of this specification is all the high level functionality which is necessary for an application to consign a job to a DRM system including common operations on jobs like termination or suspension.
- The objective is to facilitate the direct interfacing of applications to today's DRM systems by application's builders, portal builders, and Independent Software Vendors (ISVs).