

GSA-RG #1

Grid Scheduling Architecture
GGF18 - Sept 13, 2006

OGF IPR Policies Apply



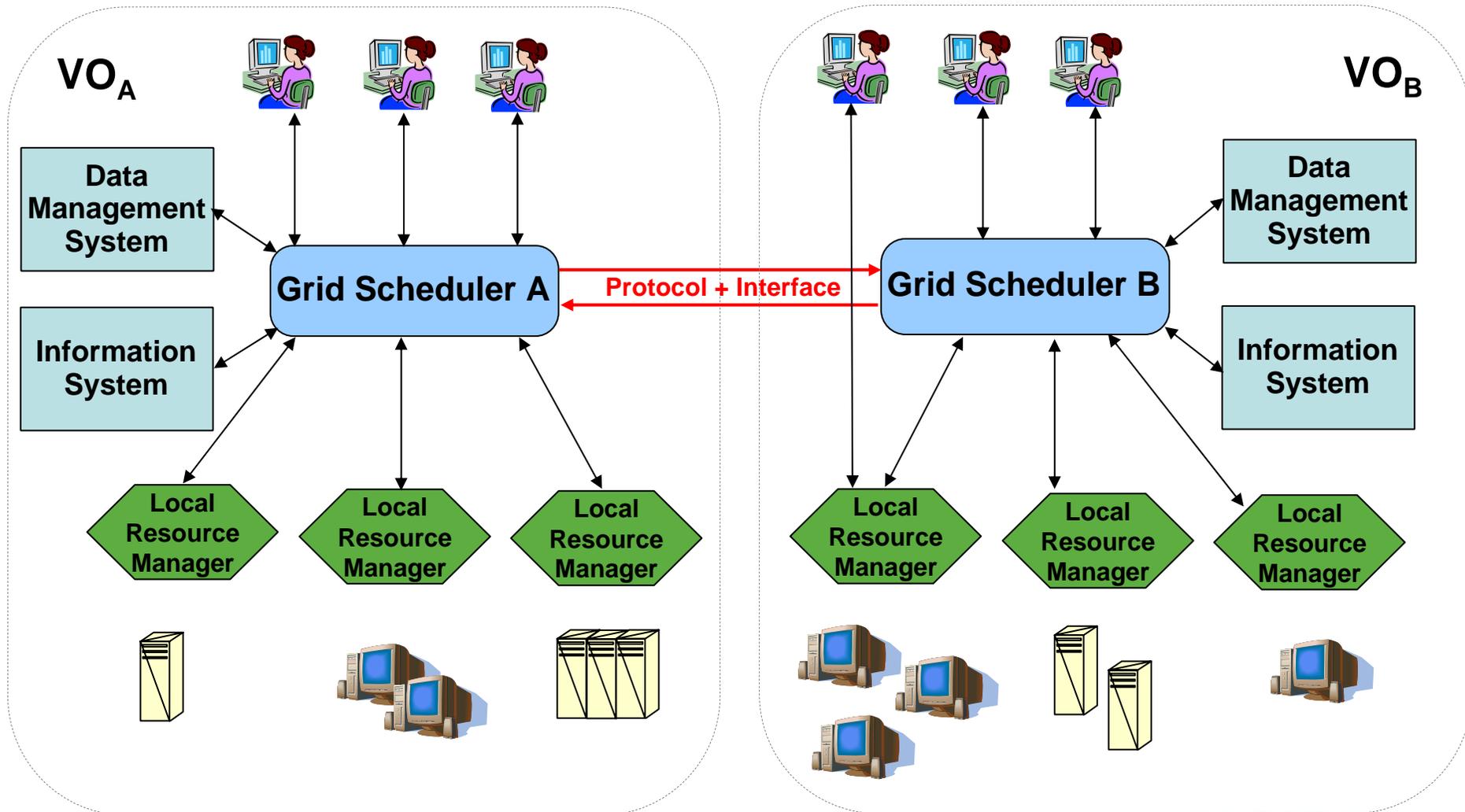
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Agenda

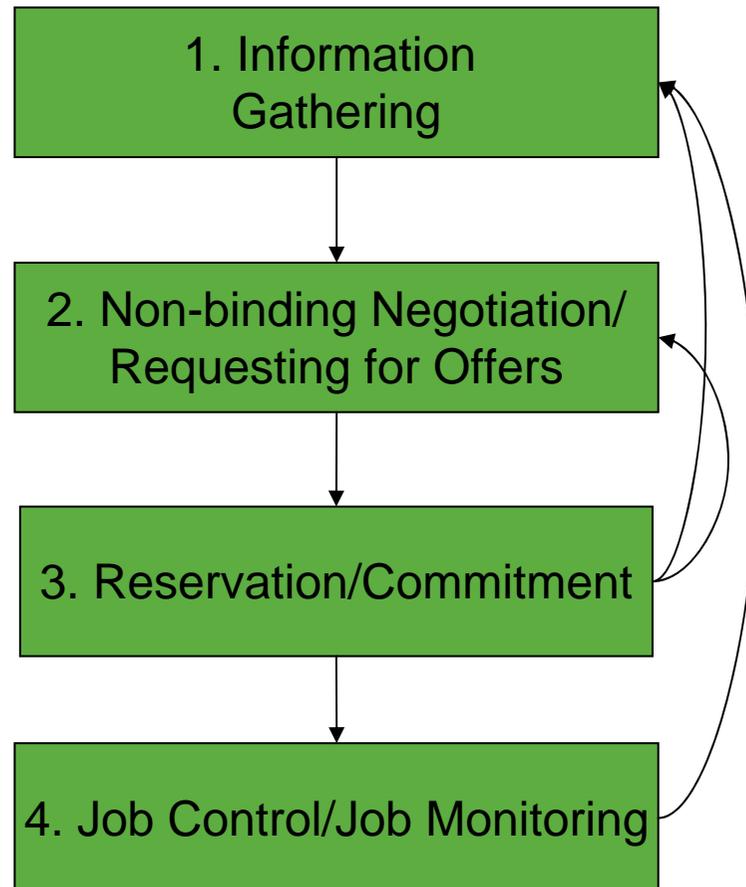


- Overview
- Interoperability between Grid schedulers
 - GRMS (Ariel)
 - VIOLA (Oliver)
 - Calana (Matthias)
- Requirements Review
 - Performance Prediction (Ariel)
- Next Steps

Interaction between Scheduling Instances



Necessary Communication Stages



1. Information gathering about available remote Grid schedulers. This may include information about available resources at remote sites. This information may be dynamic from an information service or static by scheduler configuration.
2. Non-binding negotiation may end up with several possible agreement alternatives. The initiating Grid scheduler may start parallel negotiation with several remote Grid schedulers. Economic schedulers may apply auctioning strategies in this step.
The foreseen WS-Negotiation in GRAAP-WG might be suitable for this step.
3. Agreement creation and commitment; may fail and require return to previous stages.
WS-Agreement may be a suitable protocol for this step.
4. Handing over job control to remote Grid scheduler; however, responsibility remains at initiator as the remote site may fail and re-scheduling is required.

Necessary Standards



- Common Job Description (JSDL + Extensions)
- Common Resource Model or semantic translation services between different descriptions
- Potentially: additional scheduling parameters needed in the job model (also JSDL extensions?)
- Comparison of current approaches in the different Grid schedulers.

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