OGSA Face to Face Minutes
December 3-5, 2003
Argonne National Labs

* Attendees:

        Ian Foster (ANL)
        Andrew Grimshaw (UoV)
        Bill Horn (IBM)
        Hiro Kishimoto (Fujitsu)
        Takashi Kojo (NEC)
        Fred Maciel (Hitachi)
        Takuya Mori (NEC)
        Jeff Nick (IBM)
        Andreas Savva (Fujitsu)
        Frank Siebenlist (ANL)
        Chris Smith (Platform)
        Dave Snelling (Fujitsu)
        Ravi Subramaniam (Intel)
        Jem Treadwell (HP)
        Steve Tuecke (ANL)
        Jay Unger (IBM)
        Ming Xu (Platform)

Dial in:
        Jeffrin Von-Reich (HP)
        GMA-WG participants (Abdeslem Djaoui, Brian Tierney)

* December 3

** Early Discussion

  - Welcome from Ian.
  - NB: All three co-chairs present.
  - Note taker assignment: Dave Snelling (Andreas Savva backup & merge)
  - Glossary note taker: Andreas Savva
  - Approval of last teleconf minutes - Agreed
  - Agenda Bashing.

** Re-Charter Discussion

  - Old charter is clearly out of date.
  - The implicit charter as outlined in the OGSA document is not right either.
  - Jeff proposed a three document approach:
      Framework Document + Use Cases + technology Roadmap
  - The first two we are doing, but not the third.

Agreed: Three documents

  - From implicit charter
      1. Use cases - ok
      2. Services - ok
      3. Remove hosting environment/protocol bindings
          - Include that we are agnostic to platform, e.g. OGSI.
      4. Exemplar (standard) usage patterns
          - Agreed that it is needed but words needed.
          - Most examples are from resource management.

Action: Jeff to provide words for the charter.

      5. No interoperability activities within the charter

NB: There needs to be a paragraph in the architecture document, outlining the
importance of the interoperability and platform issues (#3 and #5)
and that we expect them to be covered by the community at large.
Include pointers.

      6. No need for this WG to do profiles. Other groups may
         define these, e.g. the Life Science RG could publish a
         best practice document profile for their area.

Call out for discussion on interaction between GGF and other standards
bodies.

DMTF: Schema for resources (very descriptive e.g. CIM, SMTP).
OASIS: Basic behavior (Manageability, Metadata, Relationships).
GGF: Resource Management Profiles (meta model)
        Include composition, life cycle, patterns for use.

  - Motivated by the CMM/WSDM story.
  - Proposed to seek a solution piloted through solving
    the management process question.
  - Jeff outlined his ideas of how the standard's stack
    for management might be shared out across
    DMTF, OASIS, and GGF.
  - What are the possibilities of joint hosting
    of specifications?

Action: Jeff to add the joint spec issue to his proposal.

      7. To acknowledge and exploit relationships with other
         GGF WGs and standards bodies. We should point to
         other specifications where appropriate. [NB: GFSG
         is responsible for actual coordination.]

- Mile Stones:
    - Use Case: Final Draft to the editor by GGF10.
    - OGSA:
       Major update at GGF10
       Final draft to editor by GGF11
    - Roadmap:
       First draft at GGF11
       Final draft to editor by GGF12

** OGSI Direction Discussion

OGSI will be facing some changes in light of advances in Web Services, standard evolution in particular. The differences between Grid and Web service communities result in some convergence in terminology and concepts, e.g service vs. resource, instance vs context, etc. This will impact the nature of the OGSA document, eventually.

Hopefully, drafts will be open in early 2004.

Question for OGSA: Do we plan on re-factoring terminology etc, in the short term?

** Tracker Review

T537: Left open.

T125: Marked as agreed with action to do changes in the document.

T130: Need to work through use cases to get a better understanding of the categories. We will also consider these issues throughout the rest of the meeting.

(Tracker review to be continued on a teleconf.)

* December 4

** Program Execution:

The approach of the program execution focus session is to define the services needed to solve a particular set of problems described in the current section 4.3 of the OGSA document. Rather than produce a set of portTypes and specification of the use of protocols (e.g. WS-Agreement), the focus has been on describing the function of the different required service.

Presentation of Job Services:

Any kind of application -- not just legacy applications.
- container: capability to execute
- executable: something to execute; has associated attributes; QoX

Will not place an executable in a container that can not handle it.

Service Interfaces:

  - Job Service: Is the Job

  - Job Factory: Creates Jobs

  - Job Container: Hosts a running Job Service

  - Job Manager: Controls a set of Job Containers containing Jobs

  - Scheduler: Time/Space Allocation of Resources to Services

  - Candidate Set Generator: Creates a set of resources that "match"
    the job needs

  - Information Service: discovery is one possible implementation

  - Broker: Combines "match" properties with QoS etc.

  - Reservation Service:

  - Monitoring Services:

  - Fault Detection and Recovery:
May be functions of the job manager, for example.

  - Accounting, Billing, Logging:

  - Others still to be refined.

Are any of these "services" being worked on by other groups?

Jay asked about QOS in the container service. His point is that it is
more on the requirement side of things (i.e. should be in the job
service), than on the container side.

Ravi said that QOS is a property of resources, and that if a job is
considered as a resource, then it has QOS properties. There was some
initial disagreement of this.

There was discussion determining that QOS wrt the container actually refers to the properties of the container that can then be used to establish QOS "matching" of jobs to containers.
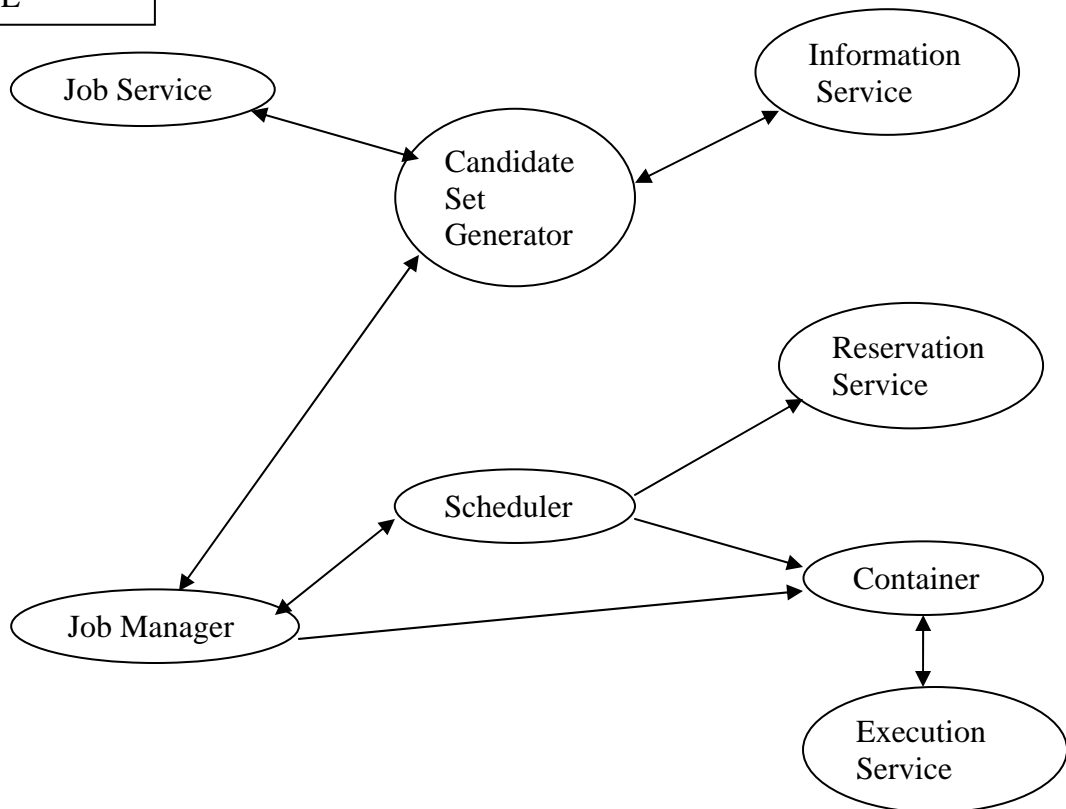
These properties (or similar) are part of both the Job Service and the Container Service.

There is a model implied here that Job Service, Job Container etc could be used as Resources (Grid Services). E.g. A Job Service can become a resources in it "is-a" Grid Service rather than simply use other OGSA services.
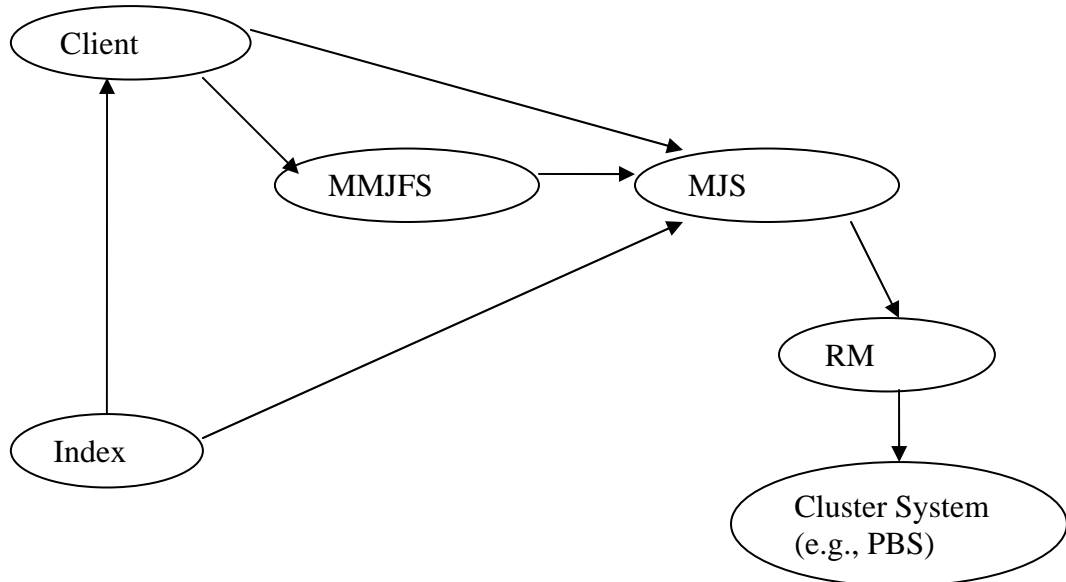
The draft proposal seemed to fit with the current strategy in GT3, although there was a different level of abstraction present. The current scheme seems to be missing the Agreement process, which is receiving a significant amount of input and support within the GGF.

Tried to match the implied interactions of the PE components with the GT3 and CSF architectures.
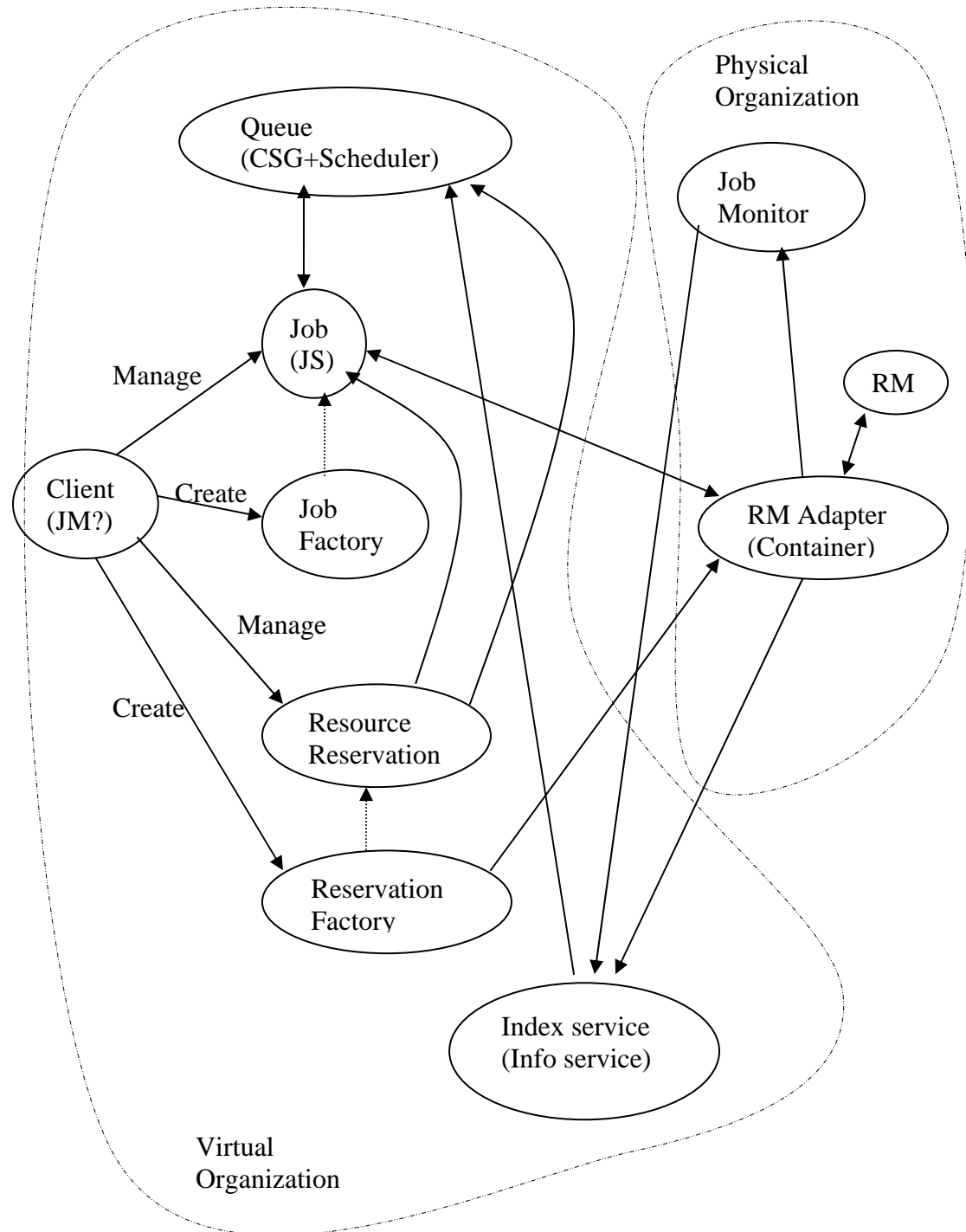
PE

Job Service

Candidate Set Generator

Information Service

Reservation Service

Scheduler

Container

Job Manager

Execution Service

GT3

Client

MMJFS

MJS

RM

Index

Cluster System (e.g., PBS)

CSF

Queue
(CSG+Scheduler)

Physical
Organization

Job
Monitor

Job
(JS)

RM

Manage

Client
(JM?)

Create

Job
Factory

RM Adapter
(Container)

Manage

Resource
Reservation

Create

Reservation
Factory

Index service
(Info service)

Virtual
Organization

Why is this a sub-activity? It is bigger than PE.

Agreed to re-organize the teleconferences so that it is clear there is no division within the OGSA-WG (see "Working Group process discussion" and "Teleconfs" further down).

** Logger System Focus Area:

  - Presentation by Bill.
  - Logging and events should probably be combined in some way to
    prevent two very similar mechanisms.
        Events are processed by logger system
        Event schema is not specified by logger
  - A very complete set of requirements - Good agreement reached on
    this.
  - Areas of interaction (see slides) also agreed, but interaction
    will be needed with WGs to confirm.
  - The focus group has done some very detailed analysis of the
    logging domain.

  - Discussion:
    - Filtering might stop things going into the log altogether
    - Make clear that filtering can be applied at different levels.
    - Why only have a read cursor?
                write cursor is just append write.
                 (Not clear if something more is needed)
    - logs are timestamped.
        - source or destination? probably both.
        - so timestamps might order log artifacts differently.
        - which timestamp is used?
    - Integrity of logs
      - one attribute of secure logs
      - not just an atribute of secure logs but of more general applicability.
    - SQL like access might imply faster access semantics.
      - filter as single mechanism to get things out of the
        log. Might have different performance requirements. Need to
        expose these so that the user can select.
    - (ogsa events may be more general than the events in systems so
 far.)
    - corba log: (broker + log combined)

** Monitoring Services:

  - Use case and service description documents provided by GMA.
    - Producers & consumers publish properties (so that agreements
      can be negotiated)

- Directory helps locate producer services
- OGSI appears not to provide all the information needed directly.
- The notification interface will need to be extended, with more
  complex query types, to implement the producer/consumer
  interfaces.
- The overlap of need in the logging, messaging, and events areas
  need to interact with the GMA group.
- The GMA group has been invited to the Wed. conference call.
  Note: that the teleconf schedule has changed. (See "Teleconfs" further down.)
- A chapter on events and notification should spell out these (and
  logging) infrastructure and outline which higher level services
  use them. The Logging and monitoring services should also point
  to these.
- Should outline some of the properties (e.g. content and QoS
  etc.) needed by the schema used by these services.
- The information and messaging may be a new category of the
  service taxonomy.

** Security:

- Candidate Security Services
  - OGSA Identity
    - OGSA security defines a mechanism to associate a
      security token with a resource (GSH).
- Identity useful only in combination with something,
  e.g., policy, or credentials.
      - These security tokens need to fit into the WS-Security
        framework.
      - The security token provides opaque identity (for
        authentication), but not a global naming scheme.
      - OGSA-AuthZ-WG is looking at this.
      - The GSH is the (global) naming scheme within OGSA.
      - Note that there is no single GSH scheme.

  - OGSA Target/Action Naming
  - OGSA Attribute and Group Naming
    - OGSA-AuthZ-WG is looking at this.

  - Transient Service Acquisition
    - Needed for delegation.

In this area we need to be careful to separate (conceptually) the idea
of a name (identity) and a authentication (security) token.

    - Identity Mapping services
    - Generic Name Mapping service
    - Policy Mapping Service

- Credential Mapping Service

See WS-Federation, WS-Trust, WS-Policy. These specs are very low level
(mechanism focused) and do not address the needs we have identified in
the use cases. The OGSA strategy should be to encourage the Security
WG in GGF to proceed.

OGSA needs to address security issues on a continual basis within our
other activities. Look at the OGSA Security Roadmap and Architecture
as a reference point. We should pick a use case to drive this
process, e.g. outsourcing SMEs' computation in a shared data center.

Action: Frank to write up a detailed use case.
(Address key issues required to solve problem and decide
what's needed by ogsa.)

** Working Group process discussion:

  - Problem with not spending enough time on a single topic. Ending up
    glossing over issues and coming back to the same or similar
    discussion.
  - Problem with too many teleconfs.

Resolved: We should meet with fewer topics in each meeting.

Resolved: Drop to two calls per week (2 hours each) with a specific topic
to be notified in advance (1 week) with recommended reading.

Use shared whiteboard system (webex) to help with teleconf
discussions. (Andrew said that Avaki has agreed to provide
access.)

Decided to have the February F2F at SDSC.

** Provisioning:

  - Cycle: ..-> Resource Allocation Plan ->
          Deployment ->
          Execution and Monitoring ->
          Analysis and projection ->..
  - Cycle presented to clarify the context for provisioning.
    - Cycle seems similar to IBM'S MAPE (Monitor, Analyse, Plan,
      Execution)
  - Provisioning in two layers: Application and infrastructure,
    but could be one layer or many.
  - Policy was also integrated in the discussion.
  - Scoping of CDDLM provided.

- A good use case of the configuration description to deployment and
  life cycle management.
- This use case is ideal for the security issue.
- The same processes might be a good way to deploy a Grid itself.
- The following also came up as possibly related: DCML, Microsoft
  SDM (dynamic systems initiative).

** Agenda Bashing for Tomorrow:

WSDM Summary:

- WSDM had a face-to-face right before the OGSA face-to-face. Fred provided a summary.
- Work in WSDM is progressing well. The architecture sub-WG has defined the basic concepts (in UML + text), and the platform sub-WG made clear the functionality and priorities. (These are the two sub-WGs more closely related to CMM and OGSA).
- GGF - WSDM collaboration is going well, with WSDM work often mentioning GGF work and the need to get the specs in sync.
- A new sub-WG for Manageability Building Blocks is being formed to write the specs of part of the functionality. Lead is Ellen Stokes (CMM-WG co-chair).
- WSDM intends to test the specs before release through prototyping. Consequently, the specs to be released up to March have been reduced to monitoring functionality only (with control, etc. to be added later), with prototypes of it already interoperating around that time.
- Some keywords
    - MUWS: Management Using Web Services
    - UPlat: Functionality, meta-data, properties.
    - UArch: UML Models for components
    - Manageability Building Blocks: Properties, Events, ...
    - MOWS: Management of Web Services
    - OMod: Modeling for MOWS

* December 5

** Glossary

  - Review of current terms (partially worked through). A lot of discussion generated around terms such as "Job."

Action: Ravi and Ming to provide sample definitions at the next teleconference for the following terms: Job, flow, submission, scheduling.

Action: Andreas to provide definitions for composition, choreography, orchestration. (Ref recent IEEE Computer article.)

Action: Andreas to upload the updated glossary.

- Process discussion:
    - Anyone can add glossary entries.
    - Proposal to add glossary discussion with a strict time limit
      (e.g., 15 min) to teleconfs
      - Choose 2-3 terms assign owners before hand & discuss definitions.
    - Glossary aim is to make sure we share common definitions within
      the group. But we should also read existing literature so as
      not to stray (and avoid too much work).

 Jem volunteered to look after the glossary. E.g., ask people to provide definitions,
suggest terms to discuss in teleconfs, etc.

** Schedule (OGSA doc release target)

 - Invite other WGs to join our teleconference.
 - Who should check our document before we submit it.
   - Other GGF groups
   - Companies (e.g., IBM, HP, ...)
   - Other standards bodies or groups (OASIS, SOA in W3C)

 - Proposal to separate out doc sections and review separately; provide parts early
   to other groups to get buy in. Start making sections more
   concrete; cannot keep producing highly abstract docs.

 - Proposal: Finish CH 1-5. Ch. 6 can wait until the general ideas are clear enough.

** Teleconfs

 - Monday (12/8) (AG)
   Definition: Job & Job service

 - 12/11 (BH)
   GMA/Information & monitoring

 - 12/15 (AG)
   High level definition of other PE services

 - 12/18 (Frank)
   Fundamental security model

 - 12/22, 25, 29, 1/1 no teleconfs

 (schedule extends into January.)

Action: Hiro to make public the complete teleconference schedule (excel sheet)

Action: Andrew to arrange access to webex system for teleconfs.

Teleconference numbers are on the OGSA site; Hiro to send out reminder.

* Resource Mgmt/CMM

- Document structure of chapters 4 and 5 need improvements. Fred discusses options.
- Fred points out that chapter 4 structure does not match categories in "Jay's picture" (Core, Program Execution, Data). Group's consensus is that the categories in Jay's picture will change.

Action: Fred will propose a new outline for chapters 4 and 5. This includes the contents of the Grid management document being drafted in CMM-WG will fit the OGSA spec. (this document was not discussed in the face-to-face due to lack of time).

Agreed to work through sections separately and then put them in the right place once we are done.