**Information Service Session (raw notes)**

* Roles:
  + information system (model)
  + metadata for descriving and using vm applciations
  + dynamic registries for dynamic services disconvery
  + technology (sustainable) and standards (maturity)
  + existing infrastructure integration (w.r.t end-users)
  + end-users to select appropriate services (and vms)
  + end-user information
  + protected information - is there some need for it?
* Potential out of scope or extras
  + interrationships with dynamic configuration and other break-outs
  + could integration profile in context

Scope:

* Services, VM images, ?
* We want to discover info about:
  + Available VM appliances
  + Scheduling related parameters useful to perform decisions
    - Hypervisor type/Virtualization tech.
  + CPU/GPU, # cores… (note from VM Mgt: Bandwidth, network type, memory, disk space, IP address, # cores, CPU, firewall rules, running time)
  + AuthZ info (can I instantiate a VM through a certain endpoint?)
  + Pricing
* To investigate overlapping of scheduling related info with monitoring requirements
* (Monitoring: who is starting/running VMs)

business models and pricing is out of scope and to be moved to a different workshop. now we must on getting the right information, making sure we can account for everything, whether they be virtualised resources or actual resources, is the first priority.  
  
Consumers of the Information

* End-users
* Brokers/meta-schedulers (e.g., WMS)
* Other services

Standards

* information model
  + leverage glue 2.0
    - endpoint to discover vm mgt endpoints
    - executionenvironment to discover tyupes of instances where to deployu vm images
  + occi defines key/value pairs
  + ovf covers specification of vms/network/storage
  + dmtf
    - virtual system profile
    - virtual system virtualisation profile
* information discovery interface
  + occi has a discovery interface + resource description based on key/value pairs
    - some mandatory: e.g. related to # cores, spu speed
  + CDMI has a discovery service for data
    - can express capabilities of storage system (e.g. type of FS)

Best Practices:

* From Cloud
  + StratusLab will address during 2nd year (federation of cloud systems)
  + Based on OpenNebula (related to monit.)
    - info about the physical system (what is available/used)
    - Ganglia for status
* From Grid
  + For info model, evaluate type of info captured in GLUE 2.0
  + Difficult to upgrade information models due to dependencies on usage/sensors; re-use experience and try to get it right
    - Importance for info service, quality of data more than completeness

Guidelines

* Evaluate how to simplify the information needed at finer grain level
  + They have been modeled in Grid but somewhat difficult to capture in a meaningful way
* “Freshness” of information; should we have a policy in the profile like “info should be old less than 5’”?

Software

* How to deliver the information
  + Messaging: ActiveMQ
* How to aggregate/store/query info
  + BDII/OpenLDAP, …
* Evaluate approach of repository as DB vs. in-memory
* P2P vs. centralized vs. hierarchical

Priorities for the Information Model

* What capabilities need to be represented
  + Compute
    - VM Appliances or as part of VM registries
  + Type of VMs you can use
  + Storage
* Network

Gaps

* Isolation between users about usage of the infrastructure
* Amount of resources available to a particular user

Work needed to remove the gaps

* About isolation of info, not high-priority
* From the technical viewpoint, moving towards virtualisation does not show big problems
  + Issue with revising the info model, the process can take time
* Analyse overlaps and differences between Grid and Cloud standards related to info model/discovery
  + maybe leverage common meetings of SDOs
  + (next week DMTF/OGF/SNIA will meet to discuss integration of OCCI/CDMI/OVF)
* Minimum profile