

Paths to adoption – Building a Commercial e-Infrastructure

Robert Harakaly

Chief Technology Officer

Constellation Technologies, Ltd.



Outline

- Who we are ?
- State of the Art
- Constellation SuperCloud
- Summary

Constellation Technologies, Ltd.

- Spin-out from Rutherford Appleton Laboratory, UK
 - Tier 1 location for gLite technology for UK and Ireland
- Very close collaboration with CERN (Switzerland) and EGEE project
 - Submitted application to become an EGEE Business Associate
- Offices in UK and in Switzerland
- Technical team
 - >7 years experience in distributed computing and grid technologies
- Funding
 - Raised ~£250k of funding
 - Raising next round



State of the Art

- Industry:
 - Constantly growing compute power requirements
 - Exploding IT expenses (HW, personnel, ...)
 - As a response:
 - More and more utility/cloud computing infrastructures appears
 - Isolated
 - Heterogeneous, mostly proprietary interfaces
 - Limited SLA support
- In parallel in academic world:
 - Existing widely deployed production quality and highly scalable grid middleware (gLite)
 - Providing solutions for some abovementioned issues
 - But
 - Current gLite deployments are inaccessible for industry
 - Limited commercial support and training
 - Missing features required by industry
 - Insufficient hiding of the system complexity
 - Still very good knowledge of the system is required

Challenges

- **Technical**
 - Complexity hiding:
 - Provide one, universal, provider independent interface usable also for non experts
 - gLite middleware:
 - Middleware hardening, documentation
 - Adding/extending by services required by industry (e.g. SLA support)
 - Build a commercial operational support infrastructure
 - Virtualisation and automatic provisioning support
 - Cloud technology:
 - Remove proprietary cloud interfaces
 - integrate clouds as gLite resource providers
 - Integrate with cloud security architecture
- **Non-technical**
 - Create an effective collaboration with different players (in many cases EGEE Business Associates) to boost the technology adoption
 - Team up with software vendors and service providers to create an effective marketplace
 - Develop portals for their service and/or software
 - Adapt licensing policy
 - Dissemination and awareness rising about the technology in the industry
 - To listen all our customers to build an universal integrated platform for utility computing

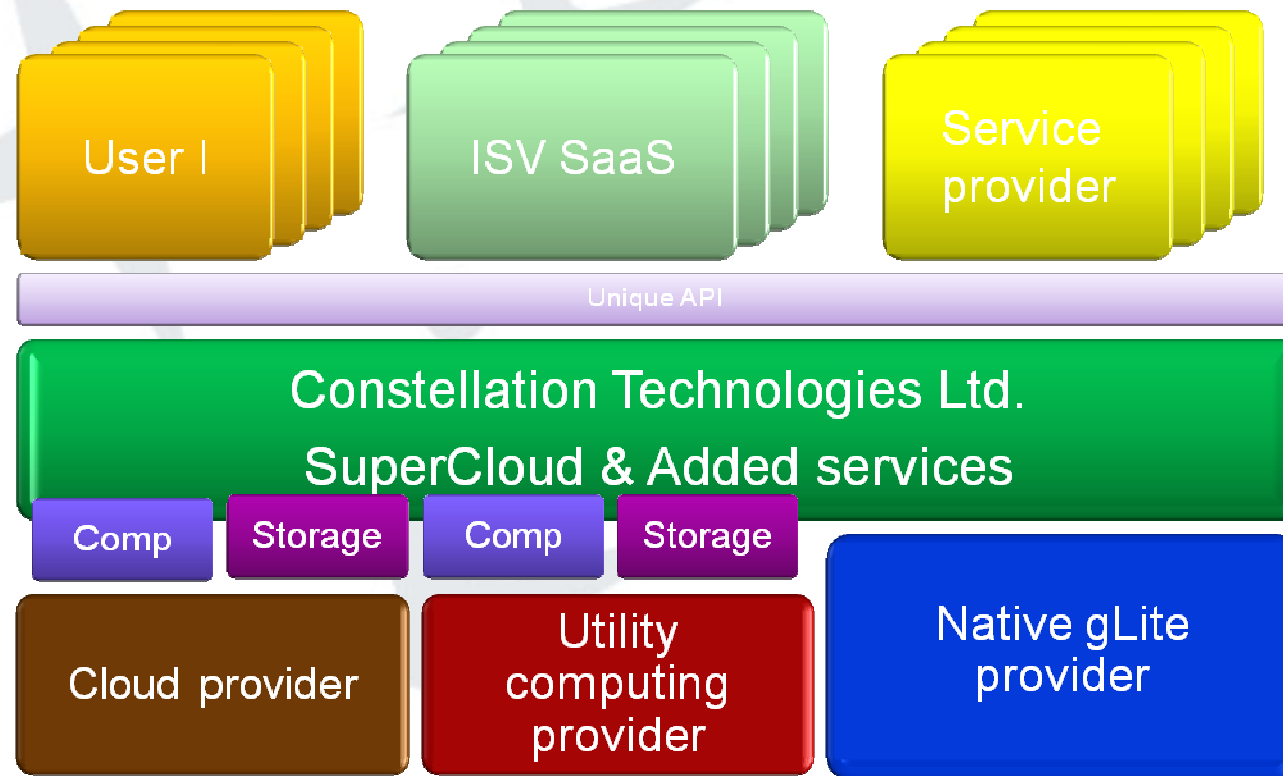
SuperCloud

- Constellation Technologies super cloud :

- gLite based
- Transparent integration/interface with storage providers (clouds, compute centers, ...)
- E-bay like platform
 - Services
 - S...
- ... job submission, ...
- ... services
- ... mentoring during the adoption/development
- ... & technical support

**We're partners for clouds
not competitors !!!**

SuperCloud



SuperCloud

- To help adoption process:
 - Participation and organisation of events
 - Boots and demo sessions on different industrial events
 - focused “Industry days”
 - End of the year “Pharma and BioInfo day in Geneva”
 - Different levels of training from management through IT personnel to users
 - “White paper on adoption process” for CTOs and IT personnel
 - Publication of “Success stories” and “Use case studies” for different industrial sectors

SuperCloud

- Technology demonstration testbed
 - Currently in discussion with the EGEE project
- Technology preview & evaluation testbed
 - Built with our commercial and academic partners
 - Technology evaluation by customers
 - Platform for technology evaluation by customers

Summary

- Constellation SuperCloud is a revolutionary concept in a compute power and storage use and trading
- Wide scale light integration of compute power and storage providers
- Advanced value added services
- New approach to IT usage
- New market opportunities for:
 - Software/Service vendors
 - Compute power providers
- Significant evolution in IT budget optimisation