

## UBIVERTEX - Letter of Intention

### Institute/Company

Name: Université Joseph Fourier, Grenoble      Country: France

Activity domain: University

Number of employees:      ☐ <50      ☐ <250      X > 500

Name of the department/research team: LIG/SARDES

### Scientific contact

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### Challenge descriptions:

Cloud SLAs still suffer from major limitations : SLA metrics used by cloud providers are limited in scope. For instance, Amazon EC2 only takes into account the availability of cloud services. SLA must involve other metrics such as performance or availability. Moreover management is not fully automated and transparent both for cloud providers and customers. Clients are expected to prove the outage and can not govern their SLA over time. Providers cannot easily automate the set up and the management of new SLA. It largely remains to design end-to-end solutions with SLAs to offer cloud services to customers with verifiable guaranties. Our objective here is to specify new SLA models for cloud environment and to design SLA management as an autonomic system which has the ability to reconfigure the set of VMs composing the distributed system when scaling up and down. The benefits will be (1) to provide customer with a mean of governance of their SLA over time and (2) to support SLA metrics such as performances and robustness and (3) to automate, from a distributed configuration point of view, the insertion/retrieval of VMs forming a distributed system.

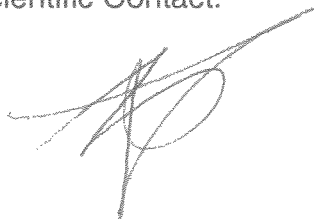
Type of commitment (internship, Phd grant, engineering staff):

1 internship, 1 Phd Student, 1 engineering staff

Number of persons involved in these challenges:

5

Signature of  
Scientific Contact:



Signature of the  
Legal Representative /  
Head of the Institute /  
Project Coordinator  
(delete as appropriate)

Date: 8 septembre 2011