

**Prot. n. 42655 – December 03, 2013**

**Published: December 04, 2013**

### **1 – Object of the call**

A 12-month contract is offered to realize the activity *“Design and implementation of techniques for the adaptive management of applications distributed over multiple clouds”* in the context of the research project described in Appendix A.

The gross salary is 39,000 euros per year.

The activities must be developed at the Department of Computer Science.

### **2 – Admission requirements**

Candidates must satisfy the following requirements:

- Hold a Ph.D. in Computer Science (or an equivalent title),
- Have technical/scientific knowledge in service-oriented computing, cloud, object-oriented programming,
- Have previous significant experience in service composition and/or cloud computing, and
- Be fluent in English.

The satisfaction of the above requirements must be explicitly declared in the application form (see Appendix B).

### **3 – Applications**

Applications must be formulated according to the attached template (see Appendix B).

Applicants must attach to their application:

- A curriculum vitae detailing all their education titles as well as their previous professional activities,
- A copy of the applicant’s passport/identity card and of her/his fiscal code<sup>1</sup>, and
- A declaration (see Appendix C) supporting that the applicant satisfies all the requirements stated in point 2.

### **4 – How and when to apply**

Only applications received **by December 13, 2013** will be accepted.

Applications must be sent to:

*Università di Pisa, Direzione del Personale  
Lungarno Pacinotti 43  
56126 Pisa, ITALY*

Applications can be sent by post via express mail or via registered mail with return receipt.

(Applicants living in Italy can deliver their applications by hand at “Ufficio Protocollo” of the University of Pisa, or via the Italian certified email “PEC” system.)

### **5 – Selection procedure**

The selection will be made by a committee composed by the Head of the Department of Computer Science (or by a delegate of the Head of the Department), who can be assisted by at most two other professors expert in the field object of the call. The selection committee will be supported by an administrative officer of the Human Resources Department.

The selection committee will evaluate the curricula of the candidates by taking into account:

- scientific publications,
- previous participation in research projects,
- knowledge of object-oriented programming,
- knowledge of SLA/QoS,
- specific knowledge of PaaS and of OASIS standards CAMP and TOSCA.

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<sup>1</sup> If any. Fiscal code is mandatory only for Italian citizens and for foreigners resident in Italy.

If necessary, the evaluation may decide to interview the applicants. (In such case the date and hour of the interview will be promptly communicated to applicants via email or phone.)

The results of the selection will be published on the Web site of the University of Pisa (<http://www.unipi.it/ateneo/bandi/cococo/index.htm>).

#### **6 – Appointment**

The Head of the Department of Computer Science, after verifying that there are no incompatibility reasons, will proceed to appoint the selected candidate. The validity of the contract will have to be confirmed by the Court of Auditors.

#### **7– Rights and obligations**

The activities object of the present call will have to be developed at the Department of Computer Science.

The development of the activities will be monitored by prof. Antonio Brogi, responsible of the project.

The University of Pisa commits to provide the contract holder with suitable office facilities to support her/his activities at the Department of Computer Science.

Insurance cover against injuries and third party liability is guaranteed by the University of Pisa.

#### **8– Person in charge of the procedure**

Samanta Landucci, Direzione del Personale, Lungarno Pacinotti, 44, 56126 Pisa.

#### **9– Publication of the procedure**

This announcement will be published on the Web site of the University of Pisa (<http://www.unipi.it/ateneo/bandi/cococo/index.htm>).

#### **10. Protection of personal data**

According to the Italian legislative decree n. 196/2003, all data provided by applicants will be used only for the purposes of the present selection.

**ABSTRACT of the SeaClouds Project**  
**“Seamless adaptive multi-cloud management of service-based applications”**  
**(EC-FP7-ICT-610531)**

Clouds reduces time-to-market and provides on-demand scalability at a low cost. Many private and public Clouds have emerged during the last years, offering a range of different technologies each suited for particular types of applications.

SeaClouds tackles the problem of deploying and managing, in an efficient and adaptive way, complex multi-services applications over technologically heterogeneous Clouds. This allows organizations to embrace Cloud solutions and avoid risks of unreliability and vendor lock-in SeaClouds provides an answer to questions such as:

- How can complex applications be deployed, managed and monitored over multiple Clouds, distributing its modules according to the deployment requirements and the strong and weak points of each offering?
- How can complex applications be reconfigured if run-time problems are detected?

SeaClouds’ approach is based on the concept of cloud-based services orchestration. Orchestration means the automated arrangement, coordination and management of multiple services as a single aggregated complex application, without the need to modify the code of the services. Orchestration can be formally designed to fulfill properties such as QoS of the whole application. Application reconfiguration is also performed by changing the orchestration of the services, when the monitoring detects that certain properties such as QoS are not respected.

The objectives of SeaClouds are therefore:

- Orchestration, adaptation, and verification of services distributed over different Clouds
- Monitoring and runtime reconfiguration of services distributed over different Clouds
- Provision of a unified Cloud-independent mechanism to manage services distributed over different Clouds.
- Alignment of SeaClouds’s architecture with major standards for cloud interoperability, particularly OASIS’ CAMP and TOSCA, promoting them in research and industrial communities.

SeaClouds aims to support developers and application managers; for these target groups SeaClouds will provide:

- In the design phase:
  - o A new approach based on TOSCA to express how each component of the application should interact with the others
  - o A language to specify requirements in terms of QoS for each components and for the application as a whole
- In the deployment phase:
  - o Tool for searching among existing Clouds in order to find those that best match the developer’s requirements expressed at design time
  - o Tools to deploy the application on the selected Clouds
- In the runtime phase:
  - o Tools to monitor and analyse the performances of each components across different providers
  - o Tools to assess whether and which components should be redeployed on different Cloud providers, in case of non-satisfactory performances
  - o Tools to redeploy the underperforming components on different Clouds and to adapt the orchestration to the new configuration.

Such tools will be organized in a framework, which will be available either as software to install on premises or as SaaS, or both.

To: Università di Pisa  
Direzione del Personale  
Unità Interdirezionale gestione delle cococo  
Lungarno Pacinotti n. 43  
56126 Pisa

The undersigned applicant <insert name and surname here>, fiscal code<sup>2</sup> <insert fiscal code here>, phone number: <insert phone number here>, email: <insert email address here>

REQUESTS

To be admitted to participate in the selection procedure referenced as “Prot. n. 42655 of December 03, 2013” for a contract at the Department of Computer Science for the activity “Design and implementation of techniques for the adaptive management of applications distributed over multiple clouds”.

Being aware of her/his responsibilities<sup>3</sup>, the applicant declares the following:

- To be born in <insert birth place here> on <insert birth date here>,
- To be resident in <insert full address of residence here>,
- To be <insert citizenship here> citizen

She/he authorises the University of Pisa to use her/his personal data according to the Italian legislative decree n. 196/2003.

She/he attaches:

- Curriculum vitae, with signature and date of signature, listing her/his education titles as well as her/his previous professional activities,
- A copy of the applicant’s passport/identity card and fiscal code<sup>2</sup>, and
- A substitute declaration of certification (see Appendix C).

<insert date here>

<sign here>

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<sup>2</sup> If any. Fiscal code is mandatory only for Italian citizens and for foreigners resident in Italy.

<sup>3</sup> According to article 46 of Italian decree DPR 28/12/2000, n. 445.

**SUBSTITUTE DECLARATION OF CERTIFICATION**

(article 46 of the DPR 445 of December 28, 2000)

I, the undersigned <insert name and surname here>, born in <insert birth place here> on <insert birth date here>, fiscal code<sup>4</sup> <insert fiscal code here>, passport/identity card number <insert passport/identity card number here>, aware of the responsibilities indicated in articles 75 and 76 of the Italian decree DPR 445/2000 concerning the hypothesis of falsehood in records and false declarations

## DECLARES

- To hold the following titles
  - <for each title insert here  
exact name of the study certificate, name of the degree, name of the University, date and grade>
- To have the experience required to participated in the selection procedure (point 2 of the call)
  - <for each previous experience include here  
A short description of the experience, period and employee>
- That all titles, certificates, and publications attached are compliant with the original documents,
- To hold the following other titles and certificates:
  - <list here other titles and certificates>

I also authorise, according to article 13 of the Italian decree D. Lgs. n. 196/2003, the treatment of my personal data for the purposes of the present selection as well as for statistical purposes.

&lt;insert date here&gt;

&lt;sign here&gt;

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<sup>4</sup> If any. Fiscal code is mandatory only for Italian citizens and for foreigners resident in Italy.