Automatic resource elasticity for the Cloud

CONCEPT
Provision for automatic, fine-grained resource allocation for Cloud applications. Commit just the right amount of resources based on application demand, performance and requirements.
Result in optimal use of infrastructure and significant reductions in costs.

CONTRIBUTIONS – EXPECTED RESULTS
A set of open-source tools to enhance cloud platforms towards automatic, intelligent, multi-grained resource provisioning according to user needs.
Consists of four components:

- **Elasticity provisioning subsystem**
  A middleware for adaptive and automatic management of platform resources.

- **Cloud information subsystem**
  A Cloud resource description framework and search capabilities for Cloud resources.

- **c-Eclipse framework**
  plug-ins for accessing and managing Cloud resources on the envisioned platform.

- **Cloud Monitoring tool**
  Multi-layer tool that gathers platform, infrastructure and application-side metrics and evaluates them in a composite fashion.

AT A GLANCE
Project title: CELAR: Cloud ELAsticity pRovisining
Project reference: 317790
Project coordinator: ATHENA Research and Innovation Centre, GREECE
Partners: ATHENA R.C. in IKT (Greece), University of Cyprus (Cyprus), Vienna University of Technology (Austria), Greek Research and Technology Network S.A. (Greece), Playgen (UK), Institute of Cancer Research (UK), Sixsq Sarl (Switzerland), Flexiant Limited (UK)
Duration: 36 months Total cost: €3.47M

Architecture

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