ConPaaS: an integrated runtime environment for elastic Cloud applications

www.conpaas.eu

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Problem
Deploying toy applications in the Cloud is easy. What about mission-critical applications?
- Capacity control
- Cost control
- Fault-tolerance
- Deployment
- Automated reconfigurations
- Software upgrades

Building everything yourself is feasible but time-consuming and error-prone.

Solution
ConPaaS is an integrated PaaS solution
- A broad range of elastic services
- Automated performance control
- Resource provisioning
- Configurable and extensible platform
- Runs on public and private Clouds: EC2, OpenNebula.
- Open-source
- No lock-in

Upload your application and relax. ConPaaS will take good care of it.

ConPaaS Services
- Web application servers: Static documents, PHP, Java
- MySQL
- Scalarix (key-value store)
- MapReduce
- Bags-of-Tasks
- Add your service to the list?

All services are fully elastic and self-managed

Research challenges
Complex application composition
Describe applications rather than services
Build a VPN automatically between nodes
Useful for resource provisioning

Performance guarantees
Multi-service resource provisioning
Give an SLO only to the front-end service
Let services negotiate performance

Cloud heterogeneity
Inherent Cloud performance heterogeneity
Several Clouds involved
Performance modeling problem

ConPaaS organization

The Web frontend

Resource provisioning

Software availability
- Software is available: http://www.conpaas.eu
- Test our technology yourself! No software install is necessary. https://online.conpaas.eu

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