Creating Open Cloud Pier an open source multi-cloud application manager for PaaS

Concertation Meeting - E2 Software & Services, Cloud Computing | Towards an interoperable European Ecosystem of services

www.cloud4soa.eu

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**Young and fragmented market:**
The actual PaaS market is, quite young, chaotic and highly fragmented, dominated by a few providers which use and promote their incompatible standards and formats.

**Vendor Lock-in and Adoptions barriers**
Cloud solutions lock customers in a single platform preventing the portability of data and software;
Interoperability and portability are a few of the main challenges to adoption of Cloud Computing.

**Platform as a Service:**
Novel paradigm that enables Software Developers to create (develop or integrate), deploy, execute, and manage business applications, using a service provided by third party (SaaS fashion).
The Cloud4SOA provides a set of tools to support Cloud-based application developers with multiplatform matchmaking, management, monitoring and migration by semantically interconnecting heterogeneous PaaS offerings across different providers that share the same technology.

Cloud4SOA facilitates the access and lifecycle management for Cloud-based application developers to the PaaS offering that best matches their computational needs.
Cloud4SOA framework

Applications developers
PaaS provider

Forum
Web UI
Frontend
CLI

Cloud4SOA Core Engine

SOA Layer
Semantic Layer
Interop. engine

RDF
Repository
Relational db

Sem. annotation

EMS
Governance
SLA
Monitorin

GIT proxy

Adapter REST

PaaS

adapter

adapter

adapter harmonized API
from...

cloud4SOA

...to

cloud pier
Cloud4SOA created 'Adapters' for 6 PaaS providers: AWS Beanstalk, Cloudbees, Heroku, CloudControl, CloudFoundry & OpenShift → **Experience in existing diversities**

A common API is already formulated that covers the needs of these 6 → **Act as Validation for a possible RI**

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<tr>
<th>Cloud4SOA Capabilities</th>
<th>AWS Beanstalk</th>
<th>CloudBees RUN@cloud</th>
<th>CloudControl</th>
<th>Heroku</th>
<th>CloudFoundry</th>
<th>OpenShift</th>
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* Importing and Exporting Data to a database is done by using the database configuration parameters, and is supported to a limited set of database systems.

** Migration of application and its data between different platforms is supported, but it is only possible between specific platforms that are mentioned with the same number in the table.
Cloud Pier’s solution: an open source multi-cloud application manager for PaaS

4 key capabilities…

- **Matchmaking**
  - Looking for that special PaaS?
  - Search and browse for the best-fit cloud platform based on your application’s requirements.

- **Management**
  - Too many clouds, too little time?
  - Streamlined “multi-cloud” management of your applications across platforms.

- **Monitoring**
  - Comparing apples and oranges?
  - Monitoring of applications deployed on several platforms, using universal metrics and user-defined SLA policies.

- **Migration**
  - Vendor lock-in got you down?
  - Enables portability of applications and their data between similar platforms (e.g., Java to Java), yet very different vendors.

…for both the supply & demand of cloud’s PaaS segment
Cloud Pier business value

- Contrast & compare different platforms for your application in a fragmented market of difficult-to-compare cloud solutions.

- Reduce operational overhead with multi-cloud application management featuring simple governance, dashboard monitoring, unified metrics and user-defined SLA policies between platforms.

- Help alleviate vendor lock-in and lower switching costs in an ecosystem of “platform adapters”, that empower the developer to migrate applications between competing private and public PaaS
Cloud Pier value

- Help enable multi-cloud scenarios for providers using a common API and “platform adapters”
- Integrate Cloud Pier services in your PaaS (e.g. simplified management, SLA monitoring, ecosystem of services using common API, etc.)
available today:
https://opencloudpier.org
https://github.com/cloudpier

for more info:
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