cloud4SOA

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

Migration Cloud Computing Semantics Interoperability Portability SOA Deployment Development Platform-as-a-service

www.cloud4soa.eu

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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).

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

WARNING

CHALLENGES AHEAD

Duration: September 2010 – August 2013

Total cost/EC contribution: 4.13 M / 2.73M Euros.

Website: http://cloud4soa.eu; http://opencloudpier.com

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.

Applications developers

PaaS provider

Cloud4SOA framework

Forum

Frontend

Web UI

CLI

Cloud4SOA REST API

SSH

SOA Layer

GIT proxy

Sem. annotation

Semantic Layer

Interop. engine

RDF

Repository

Relational db

EMS

Governance

SLA

Monitoring

Adapter REST

Cloud4SOA Core Engine

adapter

PaaS

adapter

PaaS

adapter

PaaS

adapter harmonized API
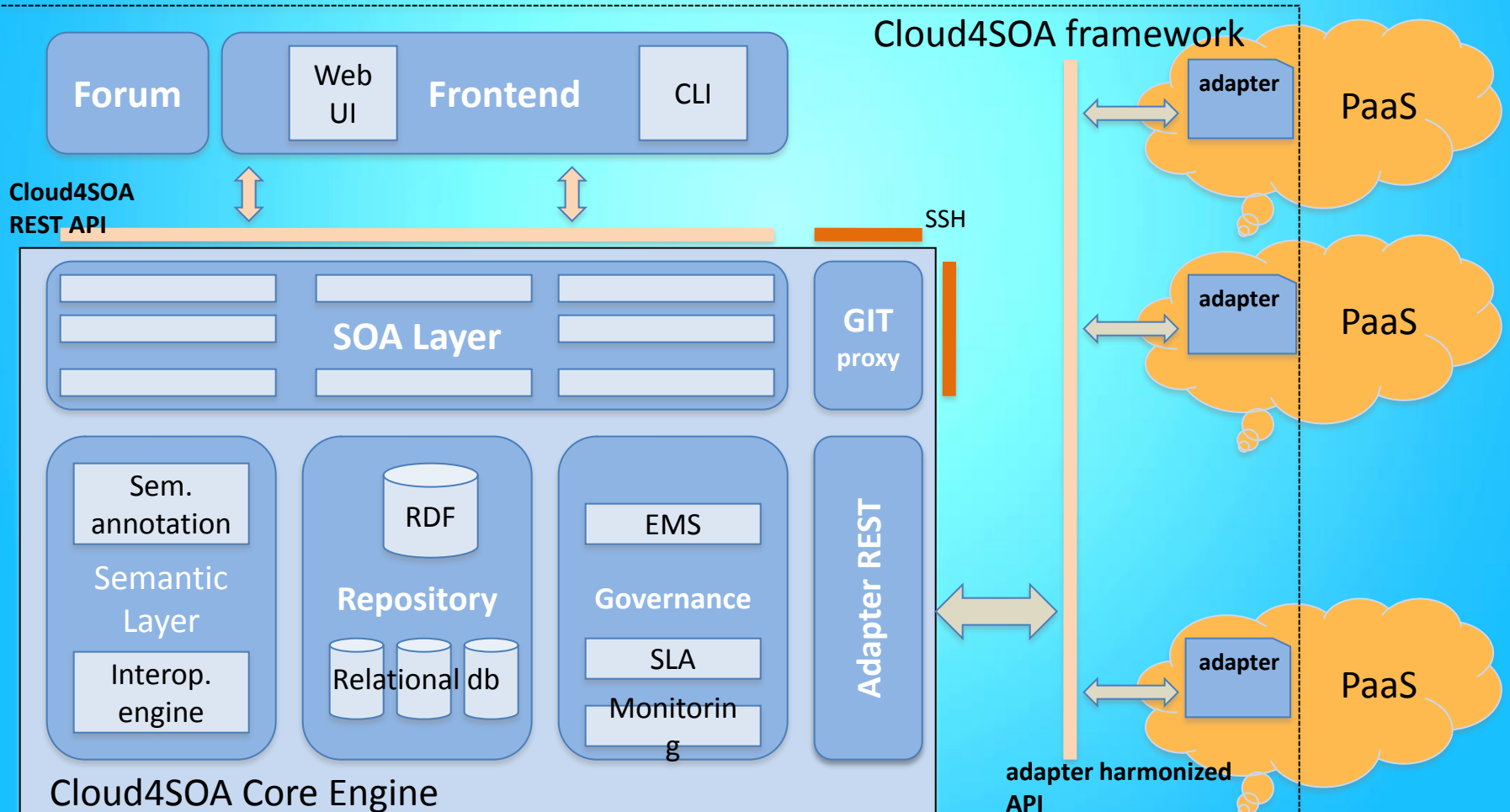
OASIS Cloud Application Management for Platforms (CAMP)

from…

…to
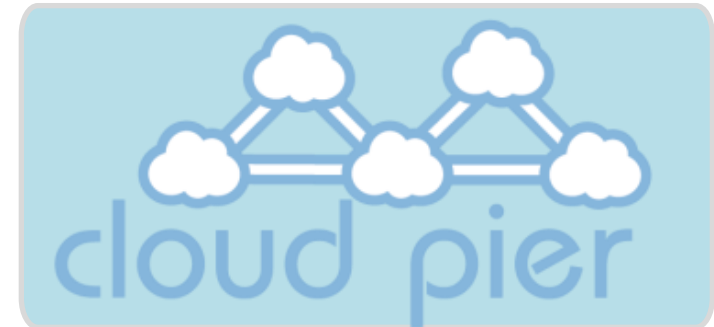
Cloud4SOA created 'Adapters' for 6 PaaS providers: AWS Beanstalk, Cloudbees, Heroku, CloudControl, CloudFoundry & OpenShift →**Experience in existing diversities**
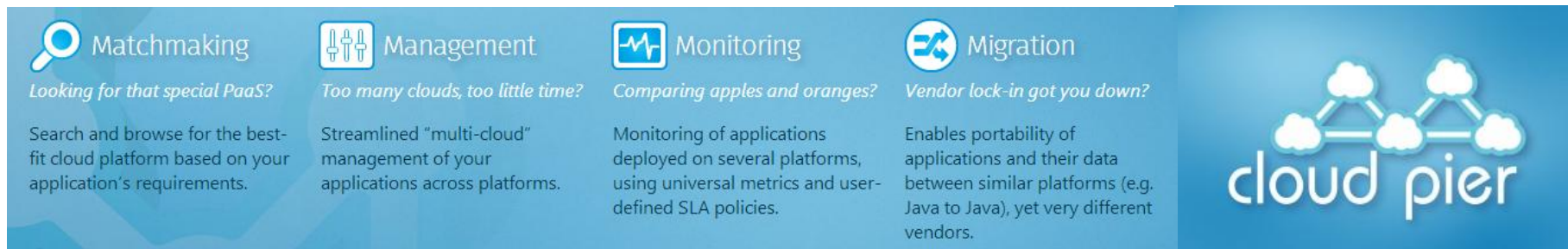
A common API is already formulated that covers the needs of these 6 →**Act as Validation for a possible RI**

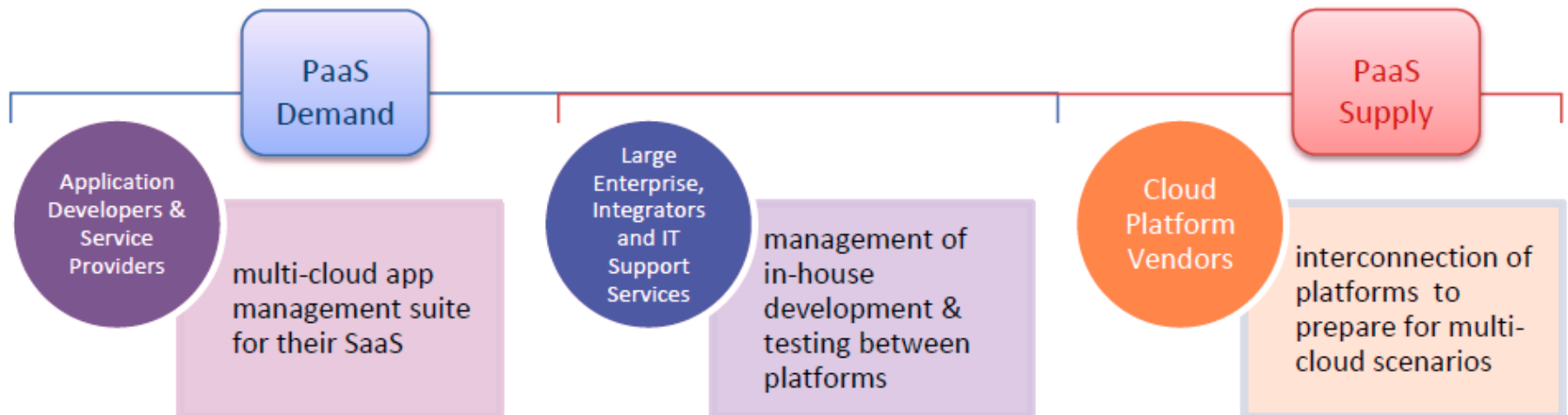| Cloud4SOA Capabilities	AWS Beanstalk	CloudBees RUN@cloud	CloudControl	Heroku	CloudFoundry	OpenShift
Matchmaking:						
The criteria and information of the PaaS within Cloud4SOA's matchmaking search.	✓	✓	✓	✓	✓	✓
Governance						
Deploy	✓	✓	✗	✗	✓	✗
Deploy through GIT	✗	✗	✓	✓	✗	✓
Start	✓	✓	✓	✓	✓	✓
Stop	✓	✓	✓	✓	✓	✓
Delete	✓	✓	✓	✓	✓	✓
Create Database	✓	✓	✓	✓	✓	✓
Delete Database	✓	✓	✓	✓	✓	✓
Import Data to Database*	✓	✓	✓	✓	✓	✓
Export Data from Database*	✓	✓	✓	✓	✓	✓
Monitoring						
get Status	✓	✓	✓	✓	✓	✓
get HttpResponse Time	✓	✓	✓	✓	✓	✓
get ICMP Ping Response Time	✓	✓	✓	✓	✓	✓
Migration						
Migrate**	⇆(1)	⇆(1)	⇆(2)	⇆(2)	⇆(1)	✗
*	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:
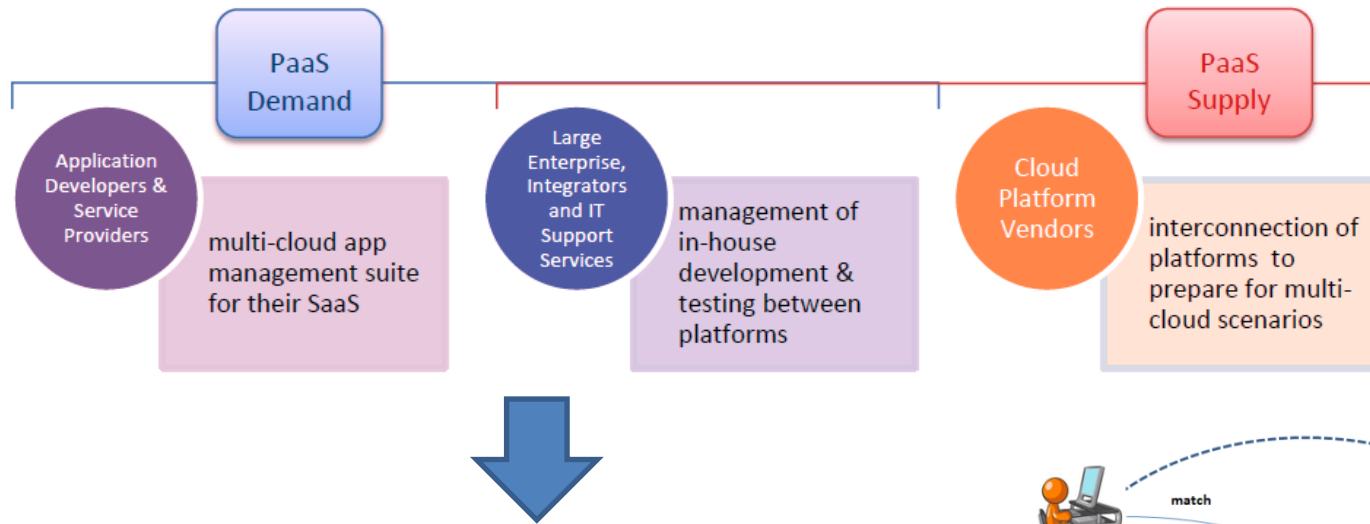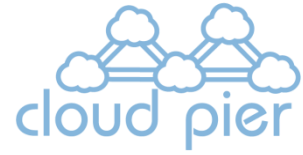## an open source multi-cloud application manager for PaaS

4 key capabilities…

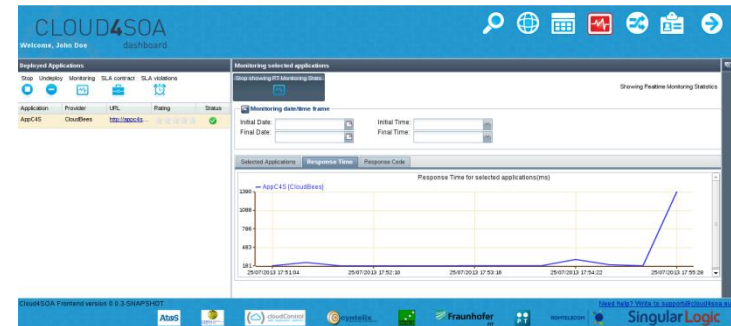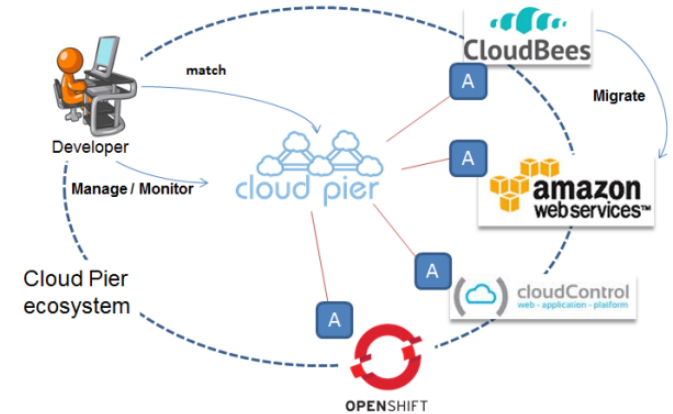| Matchmaking	Management	Monitoring	Migration
Looking for that special PaaS?	*Too many clouds, too little time?*	*Comparing apples and oranges?*	*Vendor lock-in got you down?*
Search and browse for the best-fit cloud platform based on your application's requirements.	Streamlined "multi-cloud" management of your applications across platforms.	Monitoring of applications deployed on several platforms, using universal metrics and user-defined SLA policies.	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

PaaS Demand

Application Developers & Service Providers — multi-cloud app management suite for their SaaS

Large Enterprise, Integrators and IT Support Services — management of in-house development & testing between platforms

PaaS Supply

Cloud Platform Vendors — interconnection of platforms to prepare for multi-cloud scenarios

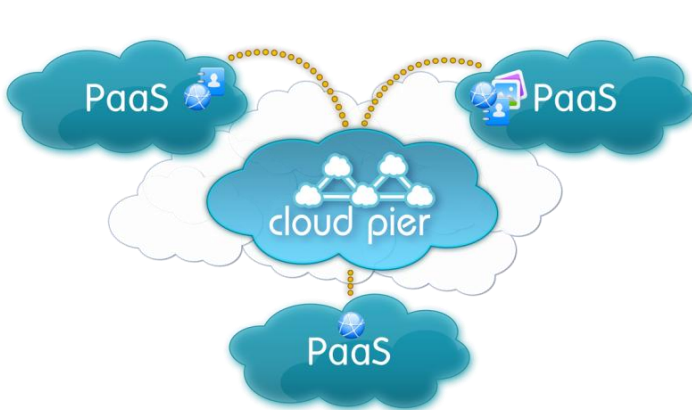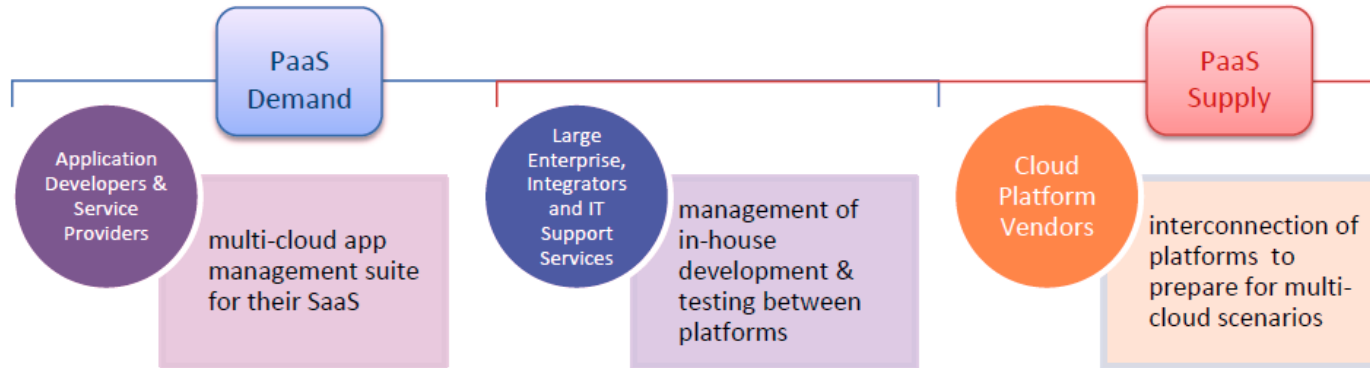# Cloud Pier business value

- ✓ **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

PaaS Demand

Application Developers & Service Providers — multi-cloud app management suite for their SaaS

Large Enterprise, Integrators and IT Support Services — management of in-house development & testing between platforms

PaaS Supply

Cloud Platform Vendors — interconnection of platforms to prepare for multi-cloud scenarios

- ✓ **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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Express Guide   Value   Try it Out!   Backgrou

cloud pier   an open source multi-cloud application manager for PaaS

Matchmaking
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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.

Learn more about how Cloud Pier can help out your application and PaaS experience, and then take it for a test spin!

After looking through the site for an overview, see our new whitepaper for a closer look on how Cloud Pier can help facilitate the PaaS segment:

Cloud Pier: Facilitating Today's PaaS Adoption and Preparing for Tomorrow's Multi-Cloud Demand

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