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Open Source API and Platform for multiple Clouds

www.mosaic-cloud.eu
mOSAIC builds a Cloudware allowing developers to deploy and port their applications on every cloud they desire.

By introducing the notion of Connectors and Drivers, mOSAIC permits to develop and implement functionalities using the preferred programming language and paradigm, without being hindered by the complexity of cloud native API.

Creating a vendor agnostic, language independent and paradigm-free API

**What's new?**
- **Open-source** deployable Platform as a Service offer
- **Support** for building applications on top of open-source deployable Cloud native technologies
- **Independence** from language and programming paradigms
- **Broker system** based on multi-agent technologies allowing resource provisioning and monitoring of SLAs
- **Cloud Ontology** for common vocabulary between the Cloud Customers and Providers
- **Semantic Engine** for discovering cloud functionalities and services from mOSAIC mediated Cloud providers and external ones; semantic matching of SLA's requirements and provisions

**mOSAIC Cloud Agency**
Development of agent services which act on user behalf

**mOSAIC software stack** has four levels, each one allowing the interaction of actors with different roles:

- New applications developers (using API, Eclipse plug-ins, or command line code packagers); deployment on the lower levels;
- Owner of existing applications using the Cloud Agency, Semantic Engine, SLA Monitor and Cloud Ontology
- Owner of deployed applications controlling components via a Virtual Cluster Manager
- Apps owners checking components behaviour through native interfaces of Cloud Resources

**mOSAIC Cloud Ontology and Semantic Engine**
Cloud Ontology enables semantic representation of Cloud resources, use cases and requirements. It acts as a common vocabulary between Cloud customers and providers.

The Semantic Engine discovers cloud API functionalities and services from mOSAIC-mediated Cloud providers; matches and aligns Cloud functions and services at semantic level; supports the inclusion of new Cloud providers into the mOSAIC platform and matches the application’s needs for Cloud resources in terms of SLAs and QoS requirements and offers.