PaaSage: Model-based Cloud Platform Upperware

Cloud computing is revolutionising the IT industry through its support for utility service-oriented Internet computing without the need for large capital outlays in hardware to deploy their services or the human expense to operate. There exist several cloud offerings such as Windows Azure, Amazon Elastic Compute Cloud (EC2), and FlexiScale. However, these platforms are heterogeneous, and the provided services and Application Programmer Interfaces are not standardised, where they impose a specific architecture on the deployed applications. Thus, porting an existing application to another platform is not only a challenging task, but also involves a high risk if the results do not meet the expected requirements. Switching between platforms just for testing purposes is also costly.

PaaSage delivers a platform for development and deployment with an accompanying methodology. Thus, developers can access services of various cloud platforms in a technologically-neutral approach that abstracts the technical details while guiding them to configure their applications for best performance.

PaaS leverages the fact that all applications consist of different logical units or modules. Development models, such as workflow-based composition and model-based application development, exploit the fact that these modules exhibit different characteristics and requirements towards the infrastructure like:

- Different dependencies with one another with regards to the data and user.
- Different quality requirements for these dependencies like interactivity, real-time response, and network bandwidth.
- Different scalability behaviour under increasing load, e.g. growing number of users and requests.

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http://www.paasage.eu/

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