elasticLM – MANAGING LICENSES AS A SERVICE

IT developments over the past years – notably Grid and Cloud computing – build the foundation for migrating from monolithic computation centres as exclusive IT providers to more flexible structures that dynamically may integrate external resources. For the independent software vendor this move raises a number of questions regarding new business models and licensing technologies.

On the side of the customers the acceptance for present business models is decreasing. Likewise, the current technology turns out to be not flexible enough or does not even work: the binding of licenses to hardware dongles, properties of the utilised hardware like CPUids, or floating site licenses are not suitable when resources beyond the own administrative domain will be used.

elasticLM is our response to the challenges the producers of commercial software are faced with respect to license technology that protects their software products in an IT world undergoing a fundamental paradigm change.

elasticLM is an innovative tool for generation and management of software licenses. Although developed for distributed computing infrastructures like Grids or Clouds elasticLM enjoys all its advantages for applications being executed on local resources like workstations or clusters. elasticLM allows protecting applications that benefit both from using resources dynamically added to those of a customer and using its own resources. For the customer the use of license–protected applications on external resources is as easy as local use while the level of protection for the ISV remains the same. Access to licenses is controlled through policies, which can be used by the software vendor to enforce its business. The customer may amend these policies with own policies governing the internal
However, elasticLM’s flexibility supports adaptations already through its standard instruments that will cover most use-cases for licensing and license management. At present APIs for Microsoft Windows and Linux are available. Both environments are supported for 32bit and 64bit systems. For Windows we support XP and Windows 7, for Linux we deliver the API adapted to the concrete operating system your application will be delivered for. If you need support for other operating systems just let us know. The license service managing the acquired licenses at the customers’ premises is implemented as operating system independent Java web-service.

For an evaluation of the system either a dedicated virtual machine at SCAI can be used or resources of the software vendor. We are open for cooperation with software vendors and application service providers. For example, we cooperate with Gridcore, a Swedish application service provider in the area of simulation software and high performance computing. Inter alia Gridcore provides a HPC testbed where elasticLM may be evaluated integrated with applications.

In addition to licensing and license management elasticLM can be used for monitoring of application usage, creation and recording of usage records for the analysis of software usage and accounting and billing. This functionality is available both for license-protected applications and arbitrary other applications.

Security has been a major concern during design and development. The sensible points for the different actors and the license mechanism itself have been identified and addressed with the implementation, e.g.

- Authentication and authorisation of end-users, administrators, services and servers
- Security of the license mechanism, e.g. license generator, manipulation of the application, tweaking of the system clock

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1 Basic Scenario

No bi-directional network link available at run-time

2 Advanced Scenario

Bi-directional network link available at run-time

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use of the licenses. Access to licenses is authorised through Service Level Agreements dynamically established between license service and end-user. In the case of Software-as-a-Service for example, these Service Level Agreements provide a binding basis for issuing an invoice later.

Offers

The integration of elasticLM into an application is as easy as embedding one module (the API) into the application. As policy decision point this API checks the authorisation for executing the application (probably with specific features) and returns the license data to the application upon positive result of the inspection.

If market standard operation is not sufficient we will integrate your special requirements into the API regarding authorisation and the transmission of license data to the application. Also, if you require a specific license model elasticLM provides the necessary interfaces to seamlessly integrate it.