SLA@SOI is a European Commission funded research project committed to deliver and showcase an innovative open Service Level Agreement (SLA) Management Framework that provides holistic support for service level objectives - enabling an open, dynamic, SLA-aware market for European service providers.

Motivation

The rapidly growing service-oriented economy has highlighted key challenges in IT-supported service provisioning. Service consumers are frustrated by the lack of formal, negotiable, readily enforceable SLAs. Service providers find it impractical to create personalised offerings, translate business requirements into technical manifestations, and optimise internal deployments whilst maintaining all individual SLAs.

Project Goals

SLA@SOI is addressing these challenges by providing 3 major benefits:

- **Predictability & Dependability**: The quality characteristics of service can be predicted and enforced at run-time.
- **Transparent SLA Management**: Service level agreements (SLAs) defining the exact conditions under which services are provided/consumed can be transparently managed across the whole business and IT stack.
- **Automation**: The whole process of negotiating SLAs and provisioning, delivery and monitoring of services will be automated allowing for highly dynamic and scalable service consumption.

SLA@SOI at a Glance

- An FP7 ICT 2007 Call 1 Integrated Project addressing Objective ICT-2007.1.2: Service and Software Architectures, Infrastructures and Engineering
- A NESSI strategic project realizing one core pillar of the overall NESSI vision - [http://www.nessi-europe.com](http://www.nessi-europe.com)
- 38 Month Project Duration, commenced in June 2008
- 12 Partners from 7 European countries: Austria, Ireland, Italy, Germany, Slovenia, Spain, United Kingdom
- Coordinated by SAP Research
- A Budget of €15.2 Million, with approx. €9.6 Million funded by the European Commission
- Grant Agreement FP7-216556
- Website: [http://www.sla-at-soi.eu](http://www.sla-at-soi.eu)
**Use Case Driven**

SLA@SOI research is grounded by four diverse industry-led use-cases:

**ERP Hosting** is investigating the practicalities and benefits of holistic SLA planning and management when offering hosted ERP solutions for SMEs.

**Enterprise IT** focuses on SLA-aware provisioning of compute platforms, managing decisions at provisioning time and runtime, as well as informing business planning.

**Service Aggregation** demonstrates the aggregation of SLA-aware telecommunication and third party web-based services: how multi-party, multi-domain SLAs for aggregated services can best be offered to customers.

**eGovernment** validates the integration of human-based services with those that are technology-based, showcasing the automated, dynamic SLA-driven selection, monitoring and adjustment of third-party provisioned services.

**Technical Approach**

SLA@SOI is defining a holistic view for the management of service level agreements (SLAs), implementing an SLA management framework that can be easily integrated into a service-oriented infrastructure (SOI). The main innovative features of the project are:

- an automated e-contracting framework
- systematic grounding of SLAs from the business level down to the infrastructure
- exploitation of virtualization technologies at infrastructure level for SLA enforcement
- advanced engineering methodologies for creation of predictable and manageable services

The accompanying figure illustrates the anticipated SLA management activities throughout the Business/IT stack.

**Planned Results**

SLA@SOI results are targeted at the technical, scientific and business domains.

- A comprehensive open-source SLA management framework will be released. It will include reference models and plug-in implementations for common deployment scenarios.
- New and enhanced algorithms and models will be published, with contributions submitted to open standards such as WS-Agreement, OGF’s OCCI, and DMTF’s OVF.
- A comprehensive example scenario will be provided, domain specific templates, plug-ins and adoption guidelines will be made available, and an overall project evaluation report including an in-depth business analysis of the four use cases will be published.

**Further Information**

For more information and the latest project results, please see [http://www.sla-at-soi.eu](http://www.sla-at-soi.eu).