



PROJECT PROFILE

Open source infrastructure for run-time integration of services

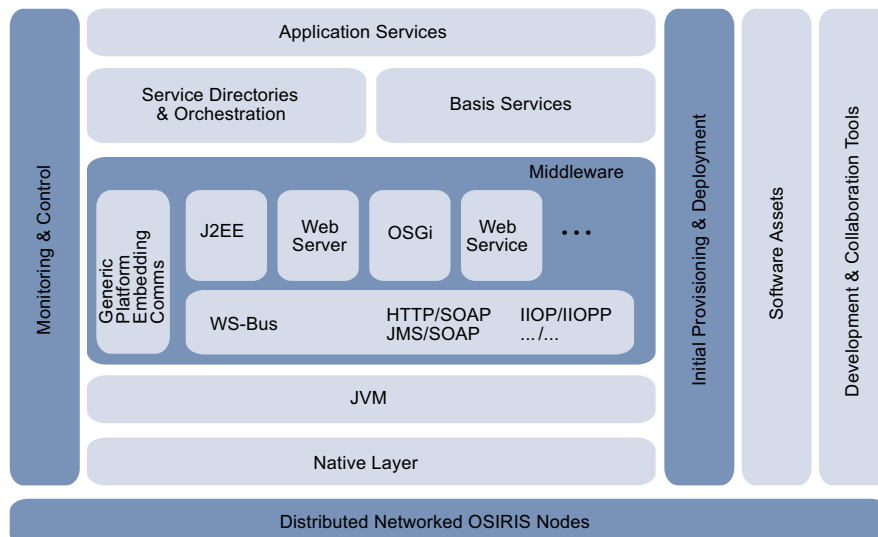
Knowledge sharing is the way ahead

In order to differentiate themselves from their competitors, organisations in many very different domains are currently seeking ways to supply their customers with high value services that make use of the Internet infrastructure. OSIRIS targets the development of a cross-domain open source platform that will offer them support and life-cycle management for service provision, aggregation, delivery and dynamic contextual adaptation.

New technological developments present outstanding opportunities for the introduction of value-added services in highly competitive markets – devices are smarter and able to communicate, the Internet offers simple and inexpensive connections. In this context,

while the demand for adaptability, scalability, reliability, security, flexibility and low operating cost of services is common to numerous sectors; it remains difficult to satisfy. Making use of the open source model paradigm would simplify the task, through in-depth knowledge exchange and sharing of common development assets.

The challenge of providing technologies to accelerate system building has already led to advances in integration technologies such as component-based development, application servers, asynchronous middleware, service-oriented architectures (SOA) and web services. However, constant growth of the Internet requires the introduction of a suitable reference platform for future distributed services.



OSIRIS (ITEA 04040)

Partners

- ASL
- Charles University
- CNR-ISTI
- CognIT
- Ericsson
- Eteration
- Gatespace
- ICT-Norway
- inAccess Network
- Instituto de Telecomunicações
- Italtel
- Karde
- Norwegian Computing Centre
- Norwegian Tax Administration
- Philips
- Portugal Telecom
- RadioNor
- RedIRIS
- Sintef
- SouJava
- SuperOffice
- Telefonica
- Telvent
- Thales
- University of Malaga
- Universidad Politecnica de Madrid

Countries involved

- Brazil
- Czech Republic
- Greece
- Italy
- The Netherlands
- Norway
- Portugal
- Spain
- Sweden
- Turkey

Project start

July 2005

Project end

July 2008

Contact

Project Leader:
Jesus Bermejo
Telvent, Spain

Email:

jesus.bermejo@telvent.abengoa.com

Project website:

www.itea-osiris.org



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OSIRIS therefore aims to provide a flexible *Open Source Infrastructure for Run-time Integration of Services* (OSIRIS platform) that will add value by permitting smooth integration of platforms, services and devices. Its core building blocks will be a set of middleware platforms, service composition technologies and infrastructure services.

Open, distributed, dynamic

There is an explosion in popularity of extensible systems, the functionality of which can be extended at run-time. These are often used to implement new programming approaches – e.g. service orientation, context awareness, and autonomic computing – which promote a highly dynamic infrastructure that is not only reactive, but also proactive.

In order to satisfy future market needs, service implementations from different providers will be required, each of them with a particular combination of functional and non-functional qualities. More complex services will be assembled via the set-up or orchestration of appropriate service chains. These will be able to evolve in time, by using the dynamic management capabilities offered by the service platform. The traditional static view of services development, deployment and management is thus replaced by a smooth and integrated support of an evolutionary process.

Systems will comprise implemented services that may themselves evolve and change in a continuous process throughout the overall life-cycle. The service-oriented architecture of OSIRIS will dramatically improve system integration through dynamic application composition, upgrading and enhancement.

The open source model proposes new forms of collaboration that will enhance competitiveness through the reuse of higher-level services across domains. It will

provide a framework for exploring the feasibility of domain-oriented communities as the means of supporting domain-independent open source middleware – as well as for identifying infrastructural elements and common web services through a planned series of demonstrators.

Great potential

OSIRIS will provide a reference architecture, platform infrastructure and tool framework with strong implications in the way that services are encapsulated, provisioned, deployed and managed in the IT and other industrial sectors.

Partners participating in OSIRIS start relying on open source communities to help grow their businesses and increase market share through the alignment of platforms and technical solutions. OSIRIS case studies in the project demonstrators will indicate how IT companies can develop business models for service implementation, and thus support the deployment of service infrastructures.

The results of OSIRIS have great exploitation potential, given the open source nature of the initiative and broad application domain addressed. Industrial partners in the project will bring and share their technical expertise, and in most cases will go on to leverage open source platforms for their own activities and related business models.

The academic and research organisations will also play a key role in contributing technical expertise. In addition to their involvement in the project itself, they have a general interest in open source – both as a highly effective way to transfer their results and know-how to the public at large; and also as an excellent pedagogical vehicle for higher level and professional education in the areas of component-based software systems, service oriented architectures and distributed web services.

ITEA Office

Eindhoven University of
Technology Campus
Laplace Building 0.04
PO box 513

5600 MB Eindhoven
The Netherlands

Tel : +31 40 247 5590

Fax : +31 40 247 5595

Email : itea2@itea2.org

Web : www.itea2.org

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