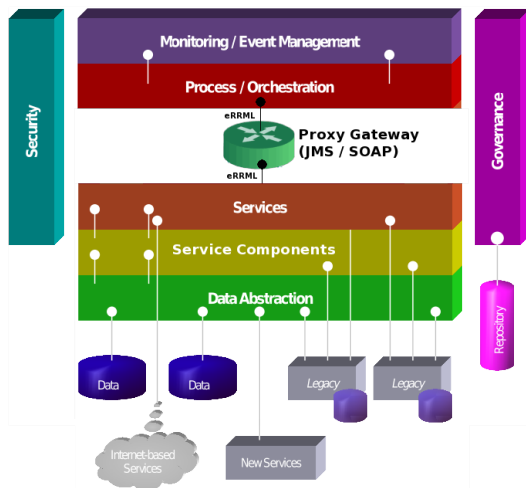


## Enterprise Process Integration & Effective SOA Management for Proven Business Interoperability

As the crown jewel in the set of products at River ST, Nilus® is the suite for a better SOA in the enterprise. Incorporates concepts never seen in traditional technologies nowadays. It allows companies to be on the track of SOA and governance of their most valuable asset, their Business!

Nilus® was built from scratch as Service Component Architecture Framework (SCAF), having into consideration how big paid and open source SOA suites work. Cutting off all the cumbersome aspects from paid and open ones. Nilus® has all the best practices gained by experts in the Banking, Automotive and Telecommunication industries with more than 7 years of experience on each, in the area of new technologies and architecture.



Nilus® provides not only external APIs to support business integration, but also internal APIs, to give agility and flexibility not only with respect to the integration capabilities at the endpoints, but also to the functionality of applications executing across the environment.

Today's SOA suite solutions are increasingly focused on interoperability, and despite their differences in architecture and design philosophy this principle of interoperability applies to Nilus®.

With Nilus® SDK, a full-fledged J2EE compliant development kit, out of which developers can benefit from to create new business components, called SCO (Service Component Objects), targeting any legacy system in order to integrate them in a chain of events that occur in a thread of execution of a business process.

The main focus on Nilus® is on transactions, where every SCO must implement rollback when required by the master process, having the chance to store transaction metadata within a persistent transaction history, being able to rebuild a whole execution history process and act accordingly to business needs.

Nilus® SCOs might contain steps, configurable via the service's contract manifest, enforcing more granularity and control over actions and transactions within a SCO component, since we understand that a single business process might target several dissimilar systems at a time to preserve integrity of the transaction.

### Nilus® In a Nutshell

- Normalized Message Service (NMS) via a standard request and response XML messages, called **eRRML** (*Enhanced Request Response Markup Language*).
- Adaptable transport system of either of the following: WAS-MQ, WebLogic, JBoss, ActiveMQ, among others.
- Event Driven Architecture (EDA), from which every **eRRML** is processed and the correspondent SCO component is loaded.
- In a spring-like fashion, mandated by the kernel, it loads up the correspondent SCO component for execution.
- Every SCO, mandated by the kernel attaches a data source coming from the **riverDAO®**, from which it can access any data storage independent of technology. Data source objects are either taken locally or from a defined J2EE container from the server though JNDI.
- Every SCO has its own *Transaction Metadata* attached to it, in order to keep the state of its own execution all the times.
- All SCO derived components, might contain steps (configurable via the service's contract) from which transaction atomization can be achieved.
- A *Transaction History Vault* controlled by the kernel, from which all transactions can be either completed or trigger a rollback.
- Complex object instantiation and serialization for *Transaction Metadata*, easily configurable via the service's contract.
- *Transaction Collision Check*, within the scope of a process might occur that a request can be careless resent by any external application (inbound), Nilus® checks for any collision to avoid any resource being used by a previous process, being called again damaging data integrity on any other application in the end point (outbound).
- Advanced filtering, it cans on demand apply any custom filter to the called SCO in order to operate any action either before or after execution. Providing maximum control over what a SCO can do.
- *Work Order Management*, Nilus® controls within a flow of processes the whole execution as in a Workflow, giving it powerful Business Process Management (**BPM**) capabilities.

# Easiness on SOA is Nilus-Shapped

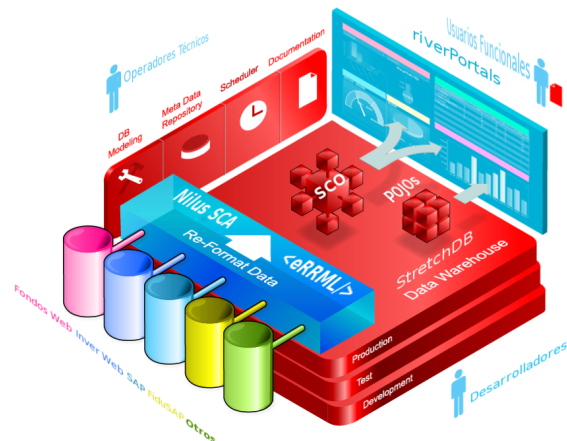
## Nilus® In a Nutshell

- Built in automatic notification system on SCO controlled execution errors, via configuration service's contract.
- Message management for errors, warning or messages, completely customizable and localizable on any language.
- Advanced logging system either to the console, text log files and database, or all at once, being able to log errors, info messages, debug or warnings, in any combination possible.
- Built in SCO database serialization, to keep state of actions in case of controlled or uncontrolled errors. With the purpose of automatic retry, or cancellation via human administration routine.
- Scheduled Jobs, **Nilus®** can be configured to operate automatic on certain hours and dates, as a programmed task, in order to include batch processes that in all enterprises occur, which might call and integrate several systems as well.
- Powerful J2EE SDK, **Nilus® SDK**, fully integrated to any IDE, usually Eclipse, allowing trained developers to create or extend current business functionality in the enterprise.
- Centralized Web Administration and configuration, since **Nilus®** implements a Web User Interface POJO hosted by **riverPortals®**.

**Nilus®** focuses on key aspects to enable SOA for the best:

- Strong Governance enforcement and administration
- Strong Service Taxonomy creation and administration
- Easy endpoint configuration being able to configure:
  - i. SOAP
  - ii. JMS
  - iii. File System Events
  - iv. StretchDB
  - v. Nilus SCO
- Strong Service Contract Management based on **<eRRML/>** (Enhanced Request Response Markup Language).

The following image depicts our holistic vision of SOA, and **Nilus®** is committed to make things easier, we base our technology under the principles of "Less is More" as well as "Keep it Simple as Possible", that translates into less TTM and TCO and increase of total ROI.



## Compatibility

**Nilus®** is J2EE compliant with SOA architecture, BPM and EAI specifications.

## Core Technologies [JAVA]

- WAS, WebLogic, JBoss, Oracle Glassfish, Apache Geronimo
- WAS-MQ, ActiveMQ, JMS
- Content Management Server
- Oracle, Postgres, MS-SQL, MySQL, H2
- SUN Solaris, HP-UX, Linux, Windows 2003 R2

## Server Hardware

- 2 CPUs 1Ghz+
- 4+ GB RAM
- 60+ GB available hard drive space

## Server Minimum Software Required

- Java (JRE 5.0 or newer)
- Oracle 11g, PostgreSQL 9, H2
- Compatible JMS 1.0.2

River Software Technologies S.A.S

Making Business Flow™

## Headquarters

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