



Driving high performance and  
cost effective solutions

# Service Oriented Architecture

Integrate, Re-use... *and Grow!*

Albia® SOA



## **Introduction**

For many years enterprise systems used to be created with one approach – developers were writing one huge application that had all the functionality defined by business requirements in one part. These systems were capable to perform business and database logic operations, handle user interactions, and sometimes talk to other systems. The later was often achieved through CORBA or other system integration technologies. But no matter which technique developers and architects used, the system would remain as a huge tightly coupled collection of functionality, which with time would grow into even bigger and harder to maintain piece of software.

Albia® provides a broad range of business and technology services that deliver real business results. With headquarters in Sarajevo (Bosnia and Herzegovina) Albia® covers many private and public sectors in different countries by bringing innovative and agile solutions delivered by top consultants through our specially designed agile consulting methodology.

For more information about Albia® SOA Solutions visit us on [www.albia.biz](http://www.albia.biz)

## What is SOA?

Service Oriented Architecture (SOA) is a computer systems architectural style for creating and using business processes, packaged as services, throughout their lifecycle. Distributed applications and systems can exchange data, trigger business processes, and be involved in enterprise cycle if they use SOA platform infrastructure.

The idea behind SOA is to enable different systems to utilize each other's functionality without knowing exact implementation.

Within SOA all processes are separated into stand alone units that can be easily reused to create applications.

SOA platform also allows business process orchestration. In order for one process to communicate with another process it must send a message to SOA. No process can be directly linked with another process, but rather they are all linked to SOA.

*No process can be directly linked with another process, but rather they are all linked to SOA*





*SOA allows smooth system integration since applications and services can be deployed on any platform or any technology.*

### **Why is SOA useful?**

SOA provides infrastructure for creating new applications out of existing ones, as well as building new services from scratch. This enables components reuse and quick application development. Any service can be easily replaced without damaging any other service, since they are all isolated. SOA allows smooth system integration since applications and services can be deployed on any platform or any technology.

### **SOA Components**

SOA mainly consists of services and ESB. Services are responsible for the enterprise logic (e.g. business or database logic, etc). Services usually consist of consumers and providers, because one entity is capable of providing some business logic, and another entity needs to utilize the service of provider through ESB. ESB is responsible for transmitting and delivering messages, routing requests to correct service providers, and convert transport protocols between consumer and provider. However, there are some other components which are also part of SOA: messages, routers, channels, etc.

## SOA and ESB advantages

SOA has big advantages for any medium to large enterprise system as it allows integration and reuse that cannot be achieved with the traditional technologies.

ESB is a central component. It consists of message broker – a mechanism responsible for transmitting and delivering messages. What it also does is – keeping messages until they are consumed. That way if a service responsible for consuming a message is offline, ESB will keep the message until the service is back online (unless configured to dispose it). So nothing will get lost even if there is some downtime for the service. Certainly if ESB is offline then no messages will be accepted or delivered. ESB can also have a so-called “guaranteed delivery” – a mechanism that will store a message in a physical location in case it cannot be delivered due to service downtime, and then even if ESB crashes, it would retrieve the message from its physical location when it goes back online, and deliver it to the recipient. Certainly ESB creates a single point of failure – if it goes down, then entire SOA infrastructure will stop functioning. Some vendors allow configuring High Availability for ESB. In case ESB goes offline, it will start a replicated version of ESB on another host.

*SOA has big advantages for any medium to large enterprise system*

Having services allows concentrating on where the real problem is. If in the traditional software systems we normally would struggle identifying performance issues, with SOA we can monitor services, and then if service A has performance issues we can fix them. This can be done by installing additional instances of service A, and then clustering them, allowing load balancing (so that we increase processing power). It is also possible to create fail over, so if instance 1 of service A fails, ESB would contact instance 2. This would not be possible with the traditional architecture.

SOA allows reusing infrastructure. For example if billing system is already working within one department, then another department can re-use that functionality if we have services. We do not need to re-invent them. All we need to do is link them to ESB and any department wishing to use billing functionality can utilize existing billing processes.

*SOA allows reusing infrastructure*

SOA and ESB also allow better maintenance. That means if we have service A, then no matter how many departments and software systems are using it, even if we have it installed on several hosts – it is still the same service, and upgrading it is a single process. While with the traditional software systems, if we have a library that is being used by different systems on different hosts, upgrading that library means re-installing or re-compiling any system that uses it, bringing down the system in several locations, etc. With SOA we only need to upgrade the service, and even if it would be off-line, any message sent to it will sit in ESB until the service is back online.

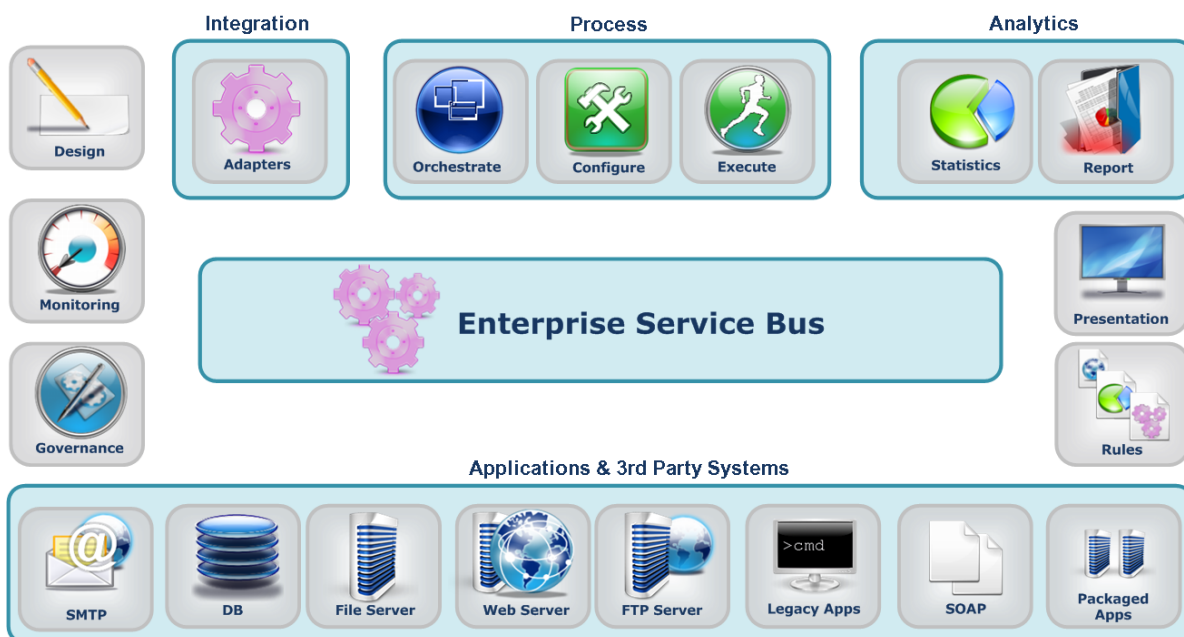


## Albia® SOA Solution

At Albia® we aim at providing our customers with the best possible solutions that can help their businesses to get a competitive edge and drive them towards their success. Which is why Albia® SOA solution allows fast implementation. By bringing you a world class ESB with easy-to-use and deploy services, you can have a fully working SOA infrastructure within days and not months.

- ✓ ESB
- ✓ Integration
- ✓ Governance

### Albia® Service Oriented Architecture



### **24x7 Helpdesk**

Albia® provides 24x7 Online Support, which includes assistance, access to our technical resources, help on all levels, and technical guide for all your queries.

- ✓ 24x7 Support
- ✓ Online assistance
- ✓ Dedicated technical engineers
- ✓ Professional Services support

Get in touch with our help desk today by logging at [www.albia.biz](http://www.albia.biz)

### **Training & Certification**

Albia® provides industrial certification for Testadon that will help you to demonstrate your competency, dedication, and high standard of knowledge within software testing and Testadon.

- ✓ Testadon Associate
- ✓ Testadon Architect

Albia® conducts regular training courses, as well as on demand trainings at customer site.

### **Professional Services**

Albia® Professional Services main mission is to ensure customer success, which is why we leverage business integration expertise to help our customers and partners become more self-sufficient in achieving, sustaining, and growing business results using Albia® solutions.

### **About Albia®**

Albia® provides a broad range of business and technology services that deliver real business results.

Being an independent software vendor and IT services provider, we deliver innovative software platforms and integrated enterprise systems. By establishing long term partnerships, we work towards the success of our clients in Europe and the Middle East.

With headquarters in Sarajevo (Bosnia and Herzegovina) we cover many private and public sectors by bringing agile solutions delivered by top consultants with specially designed methodology. Our proven technologies and solutions help our customers to grow, be competitive, and get to the next level faster!

© 2010 ALBIA® All rights reserved.

ALBIA® and all ALBIA® products are either trademarks or registered trademarks of ALBIA®. Other product and company names mentioned herein may be the trademarks of their respective owners. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, photocopying, recording or otherwise, without prior written consent of ALBIA.

ALBIA d.o.o.  
Azize Šaćirbegović bb.  
Sarajevo, 71000  
Bosnia and Herzegovina  
[info@albia.biz](mailto:info@albia.biz)  
Tel: +387 33 664 577  
[www.albia.biz](http://www.albia.biz)

