



Summary of Seros Approach, Services, and Products

Contents

Part I: Seros Approach

Part II: Seros Services Summary

Part III: Seros Products Summary

Contact Information:

Seros, Inc.
1755 Telstar Drive, Suite 206
Colorado Springs, CO 80920
719-599-8150 x168
www.seros.com

Part I: Seros Approach

At Seros, our goal is to build long lasting partnerships with our Customers to **Accelerate Their Service-Oriented Architecture (SOA)/Cloud Implementation and Provide its Full Business Value**. SOA and Cloud Computing are enabling capabilities that have a corresponding **Business Model, Architecture and IT Model**, and **Process and Governance Model**. At Seros, we work with our Customers to focus on capturing the interactions of the three fundamental models in our product offerings and our consulting services. By ensuring all three models are considered, our SOA/Cloud implementations provide a framework to launch new revenue producing and innovative offerings with a quick time to market. Seros believes that our Customer collaborative, focused approach to products and services can help our Customers achieve the following benefits from their SOA/Cloud capability.

- **Focused SOA/Cloud Business Models** generate benefits by providing:
 - A contract (or interface) driven basis for the cooperation of both internal and external partnerships that are independent of specific technologies and enterprise applications/products
 - A framework to uniformly share and aggregate business information to combine business and transaction analytics
 - A framework for Cloud Computing based services delivery method focused on the user/customer experience
 - A framework to launch new revenue producing and innovative offerings with a quick time to market
- **Focused SOA/Cloud Architecture and IT Models** generate benefits by providing:
 - Efficiencies gained by using services and modular components instead of point-to-point integrations that are costly to test and maintain
 - A technical basis for rapidly augmenting the generic capabilities provided by enterprise applications as well as the ease of future migration to new/next generation enterprise applications/COTS products
 - Business processing capabilities in a commodity manner that are rapidly consumable by internal users, external users, and partnerships
 - A Cloud Computing framework that provides a superior user/customer experience using standardized (i.e., commodity) offerings that are rapidly provisioned, flexibly priced, and easy to access
 - A framework to integrate business with enterprise architecture, design engineering, and embedded capabilities
- **Focused SOA/Cloud Process and Governance Models** generate benefits by providing:
 - A Governance layer between business needs and IT to balance organization IT standards, information security, and other regulatory requirements with required business capabilities
 - A framework to leverage existing investments and reduce duplication
 - A framework to incorporate industry standard infrastructure on commodity based servers and other hardware

Additionally, Seros can provide **Cost Models for Estimating Project Costs** as well as **Return on Investment Models** to show how shared, reusable web services can generate cost savings and avoid unnecessary costs.

Part II: Seros Services Summary

Seros' goal is to build a strong partnership with our customers. We strive to become a member of a seamless "One Badge – One Team" effort with many different contributors that cooperate to solve problems and accomplish all tasks on time and on budget. We do this by working hard to understand our customer's SOA/Cloud Business Model, SOA/Cloud Architecture and IT Model, and SOA/Cloud Process and Governance Model so that we can provide the technology solutions and services needed to align business goals with cost-effective, highly responsive information technology.

Seros provides a broad set of consulting services as summarized in the table below. Additionally, by clicking on the name of the service provided, you can see a representative set of examples of how we have helped our customers be successful.

Services Provided	Short Description
Instantiation and Maturation of SOA/Cloud Computing Foundations	Complete range of services from needs assessment, architecture and design, trade studies for product selection, training on SOA design patterns and principles, product installation, product integration, and operations
Enterprise Security Architecture, Engineering, and Implementation	Complete range of services from needs assessment, architecture and design, single sign-on and federated identity management, configuration of XML appliances, SOA Security, hardening, and regulatory compliance
Integration of Core Infrastructure Products, Enterprise Applications, and Data	Application of enterprise integration and other design patterns to quickly integrate legacy and other existing capabilities into SOA and non-SOA environments
Program and Project Management	Full spectrum program and project management capabilities to include cost modeling, return on investment modeling, schedule development, cost and schedule management with a focus on driving to meet or beat commitments, metrics-driven process tracking, and team building
End-to-End System Engineering	Application of system engineering and design principles to ensure end-to-end satisfaction of both functional (i.e., business logic) and non-functional (i.e., performance, data integrity, etc.) requirements
Process and Governance Engineering	Development and implementation of engineering/SOA governance processes based on proven best practice principles along with CMMI Level 3 to Level 5 compliance
Database Architecture, Design, and Performance Optimization	Architecture, design, and development of performance optimized databases in accordance with industry standard canonical models such as Insurance Application Architecture (IAA), Association for Cooperative Operations Research and Development (ACORD) and industry standard normalized forms
Engineering of Daily IT Operations Capabilities and Continuity of Operations	Design and completion of operational instructions and run books, system administration manuals, help desk instructions, disaster recovery procedures, and continuity of operations procedures
Organizational Mentoring and Maturity	Establishing SOA Competency Centers within your organization, end-to-end process and governance training, SOA design pattern training, web service design and development training, security implementation training, and side-by-side mentoring to enhance customer skill sets

Instantiation and Maturation of SOA/Cloud Computing Foundation Examples:

- Produced needs assessment and architecture design documents to help organizations decide their next set of SOA/Cloud implementation steps
- Created a SOA/Cloud Reference Architecture implementation based on open standards and open source products to provide company-wide exposure, experimentation, and training on SOA design and implementation patterns
- Developed a web service contract (i.e., WSDL files) design process using canonical models that reduced the contract production time from weeks/months to just days
- Implemented a library of over 45 shared, reusable services to support membership information, billing and payments, and insurance policies/claims
- Implemented a library of 14 utility services for data transformations, batch control processing, tracking and auditing transactions, and uniform logging of enterprise level events

- Provided WS-* brokers that allow companies to comply with the commonly accepted web standards while reusing existing product investments where the products did not comply with the standards
- Utilized the Seros Information Distribution Service (IDS) to federate multiple messaging capabilities (based on different commercial products) to create an enterprise wide messaging capability
- Utilized the Seros Governance and Management Service (GMS) to federate and interpret web service monitoring information being collected by multiple different commercial products
- Utilized the Seros User-Based Orchestration Service (UBOS) to dynamically connect to multiple information sources, further process/analyze the aggregated information, and make routing decisions for the aggregated information

Enterprise Security Architecture, Engineering, and Implementation Examples:

- Designed and implemented enterprise wide single sign-on and federated identity management solutions for customers to include developing tool kits to simplify the integration with existing capabilities
- Performed security assessments of existing enterprise architectures with a focus to produce a security risk gap analysis and develop road maps to mitigate the risks
- Produced web service security policies, configuration documents, and operations documents to implement customer's security capabilities using XML appliances (IBM DataPower and Layer7)
- Designed and implemented security solutions to ensure compliance with various regulatory mandates and company policies regarding the processing of credit card and personal information

Integration of Core Infrastructure Products, Enterprise Applications, and Data Examples:

- Designed and implemented mediator/adaptor services to integrate legacy capabilities with enterprise applications, databases, and SOA foundation components
- Utilized enterprise integration patterns and principles to integrate enterprise applications such as: CRM, ERP, sales, billing and payment, and membership
- Integrated mobile applications into existing legacy infrastructure to rapidly create new sales and marketing channels
- Developed batch control processing utilities to support batch integrations with Extract, Transform, and Load (ETL) capabilities along with other legacy applications and databases

Program and Project Management Examples:

- Worked side-by-side with customer's program and project managers to quickly turn "red" programs into "green" programs that were no longer on the critical path. In some cases this has taken as little as six weeks to move a "red" program to "green"
- Reviewed existing processes and procedures and then took corrective actions to eliminate redundancies, implement effective peer reviews, and provide highly effective cost and schedule control methods
- Defined and instituted various control boards for configuration management, testing management, defect management, and operational deployment management
- Created a detailed web service development cost model for future cost estimates based on actual experience and lessons learned that allows for the rapid development of accurate cost estimates for program/project planning purposes and/or trade study decisions

- Created a detailed SOA/Cloud Return on Investment (ROI) Model to quantify the significant ROI and business case for continued use of SOA/Cloud approaches

End-to-End System Engineering Examples:

- Defined and instituted end-to-end design review boards to ensure consistent definition of interfaces and data exchange across multiple programs/projects
- Provided control mechanisms to manage the overall technical and schedule baselines
- Provided performance engineering to ensure non-functional requirements such as response time, throughput levels, reliability levels, etc. are addressed throughout the architecture, design, and testing phases

Process and Governance Engineering Examples:

- Developed and documented a complete SOA Design and Development Process with traceability to CMMI standards and tailored to meet customer's needs
- Created an overall SOA/Cloud Governance Process traceable to the customer's existing SOA Design and Development Process and implemented the process using the IBM Websphere Service Registry and Repository product
- Installed, configured, deployed, and provided training on multiple different types of service registry/repository products to include HP SOA Systinet and IBM Websphere Service Registry and Repository
- Defined and implemented industry best practices for Configuration Management to ensure effective control of technical baselines
- Defined and implemented a versioning scheme and release process to streamline development and allow for preplanned weekly releases coordinated with all stakeholders

Database Architecture, Design, and Performance Optimization Examples:

- Designed and implemented unified database views that provide a single view of the data contained in multiple different databases
- Designed and implemented data services to uniformly deliver data to enterprise applications, web applications, and other web services
- Extended the data model for a large enterprise application to incorporate customer unique data and business logic
- Developed database query optimizations to increase performance levels by a factor of 2 or more

Engineering of Daily IT Operations Capabilities and Continuity of Operations Examples:

- Developed operational run books to describe how to operate, administer, monitor, and maintain delivered products and other capabilities in addition to performing transition training to customer operations staff
- Developed disaster recovery and continuity of operations plans for delivered products and capabilities

Organizational Mentoring and Maturity Examples:

- Developed Competency Center/Center of Excellent web sites (or repositories) that contain process descriptions; web service design patterns and principles; architecture and design templates; architecture, design, and coding examples; peer review checklists, training materials,

and other types of artifacts. All of these artifacts serve as the cost effective, repeatable, and institutionalized knowledge base for the customer.

- Placed Seros staff side-by-side with customer staff to mentor and train on SOA/Cloud technology and SOA/Cloud program management tools and techniques
- Conducted focused training on SOA design patterns (messaging, data publishing and search, governance and management) and how to implement the patterns using a set of SOA foundation products

Part III: Seros Products Summary

Introduction: The Seros products have been architected and designed to support the interactions and integrations with a customer's SOA/Cloud Business Model, SOA/Cloud Architecture and IT Model, and SOA/Cloud Process and Governance Model. We do this by providing a set of SOA infrastructure services that are composed into an integrated SOA Foundation (or platform) that is: easy to use and access, can be rapidly provisioned/deployed, supports multiple security models, available at a fraction of the cost of other vendors integrated SOA Platforms, and the services can be delivered from the Cloud.

Business Model Perspective: At the core of the Seros Solution Approach is a commoditized approach to SOA/Cloud core enterprise services. Today's IT organizations are focusing on a new approach that embraces open standards, open source products, commodity computing platforms, service delivery from the cloud, vendors that perform specific (but not monolithic) functionality, metadata strategies based on business domain vocabularies, and building partnerships. The Seros Solution Approach leverages the specification and implementation of reference architectures that allow for a low cost, modularized building block approach to SOA/Cloud infrastructure and quickly enables the rapid implementation of shared, reusable business services. Additionally, this approach provides a highly vendor neutral approach without sacrificing capabilities.

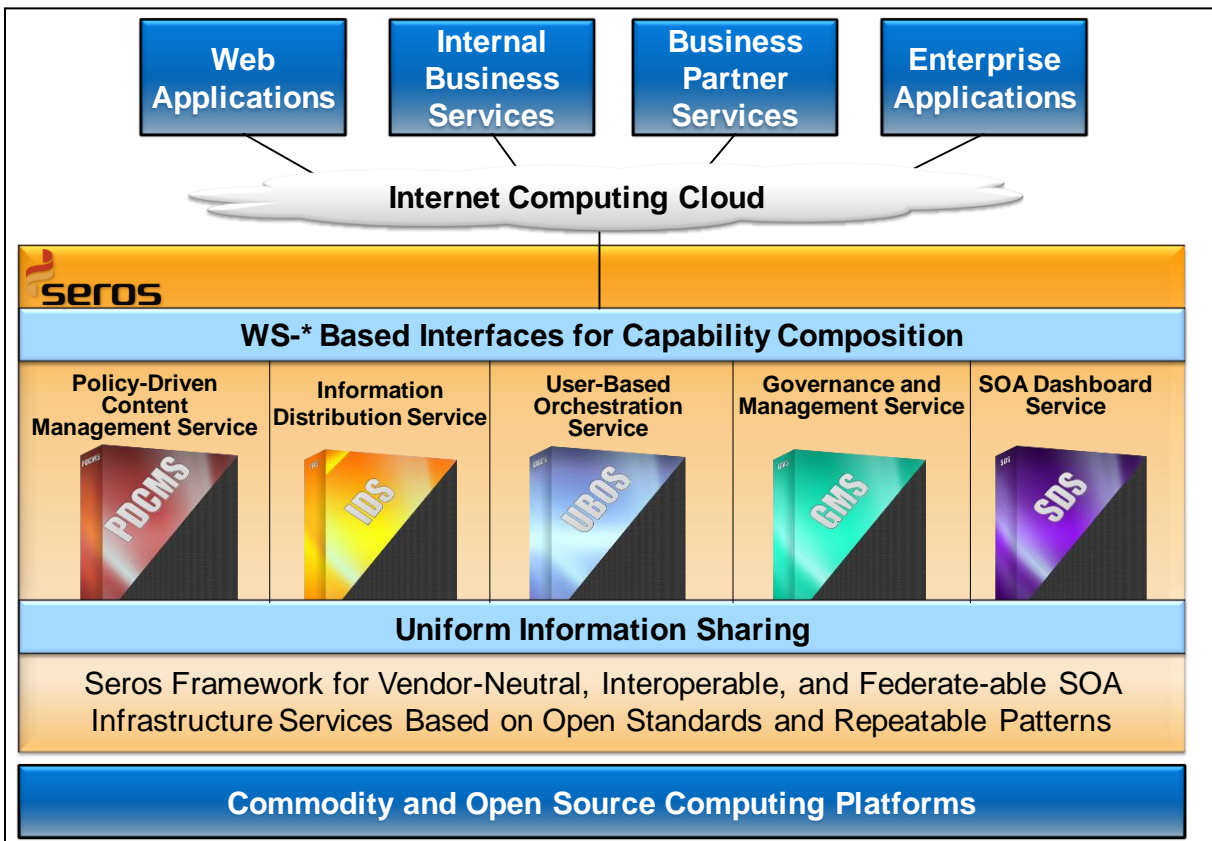
Architecture Model Perspective: The basis for the Seros Solution Approach is a reference architecture that leverages the WS-* open standards. The reference architecture allows for multiple different capabilities to be composed together via a common design pattern. As a result, Seros can treat an integrated SOA environment as a pattern – not as an off-the-shelf product capability from a single vendor. Two reasons for using the pattern approach are: 1) heterogeneous technology is more common than not in large organizations, and 2) we can reduce duplication by focusing on interface standardization and format translation. Additionally, the use of the WS-* and other open standards enables interoperability and federation. Thus, we allow our customers to focus on: 1) the required SOA Patterns (e.g., messaging, security, data publishing and discovery, etc.) to be implemented rather than products, 2) creating a SOA infrastructure that is transparent to the consumer (both internal and external) from a product perspective, effectively creating "the cloud" and 3) utilizing commodity and open source based computing platforms.

Seros provides a set of affordable and extensible SOA Foundation Products implemented as services using the WS-* interface standards. Additionally, the Seros products can be used across the entire spectrum of SOA maturity -- from organizations that are just beginning their planning for a SOA implementation -- to organizations that have made SOA investments and want to preserve these investments – to organizations that are delivering their infrastructure services over the Cloud.

The Seros SOA Foundation Products:

- Are delivered as a set of open standards based, collaborative web services that provide an alternative to a single vendor approach.
- Provide a Design Pattern based framework with a high degree of flexibility in SOA product choices (vendor or open source).
- Significantly improve interoperability and federation between a selected set of best-of-breed/best value products.
- Incorporate metadata standards and automated publishing to enable large scale data standardization, visibility, and accessibility.
- Are deployable to commodity and open source based computing platforms and can be delivered over the Cloud.

A context diagram for the Seros SOA Foundation products is shown below along with a table that summarizes each product's capabilities, the open standards it complies with, and the COTS/Open Source products it can interoperate and federate with.





**Aligning Business Goals with Cost-Effective, Highly Responsive
Information Technology Solutions and Services**

SOA Foundation Infrastructure Service	Short Description	Supported WS-* and other Open Standard Interfaces	Interoperable Products
Policy Driven Content Management Service (PDCMS)	Provides the capability to rapidly configure dynamic content on websites via an intuitive policy editor and to manage that content through lifecycle phases in one intuitive user interface.	<ul style="list-style-type: none"> • XML-Based Metadata Definitions • WS-Management • WS-Policy • WS-Security • WSRP and JSR168/286 	• Liferay™ Portal
Information Distribution Service (IDS)	Provides a secure and guaranteed delivery messaging capability	<ul style="list-style-type: none"> • WS-Notification • WS-BaseNotification • WS-BrokeredNotification • WS-Topics • WS-ReliableMessaging • WS-Addressing • WS-Management • JSR-168 (Portlets) 	<ul style="list-style-type: none"> • Apache™ ActiveMQ™ • JBoss® • Oracle® ESB • IBM® Websphere® • Progress® SonicMQ®
User-Based Orchestration Service (UBOS)	Provides the capability for users to dynamically modify business process orchestrations without requiring the involvement of programmers	<ul style="list-style-type: none"> • WS-BPEL • EXT-JS/GWT 	<ul style="list-style-type: none"> • Apache™ ODE • ActiveVOS™
Governance and Management Service (GMS)	Provides the capability to govern, monitor, and manage web services and other types of network resources	<ul style="list-style-type: none"> • WS-Management • WS-Policy • WS-Transfer • WS-Enumeration • WS-Notification • WS-Addressing 	<ul style="list-style-type: none"> • IBM® DataPower® and Layer 7® • JAMon • Microsoft® Operations Manager • Oracle® AmberPoint® • Hewlett Packard® Systinet™
SOA Dashboard Service (SDS)	Provides a unified user interface to the WS-* based capabilities	<ul style="list-style-type: none"> • JSR-168 • Web 2.0 • Section 508 Compliance 	• LifeRay™ Portal