

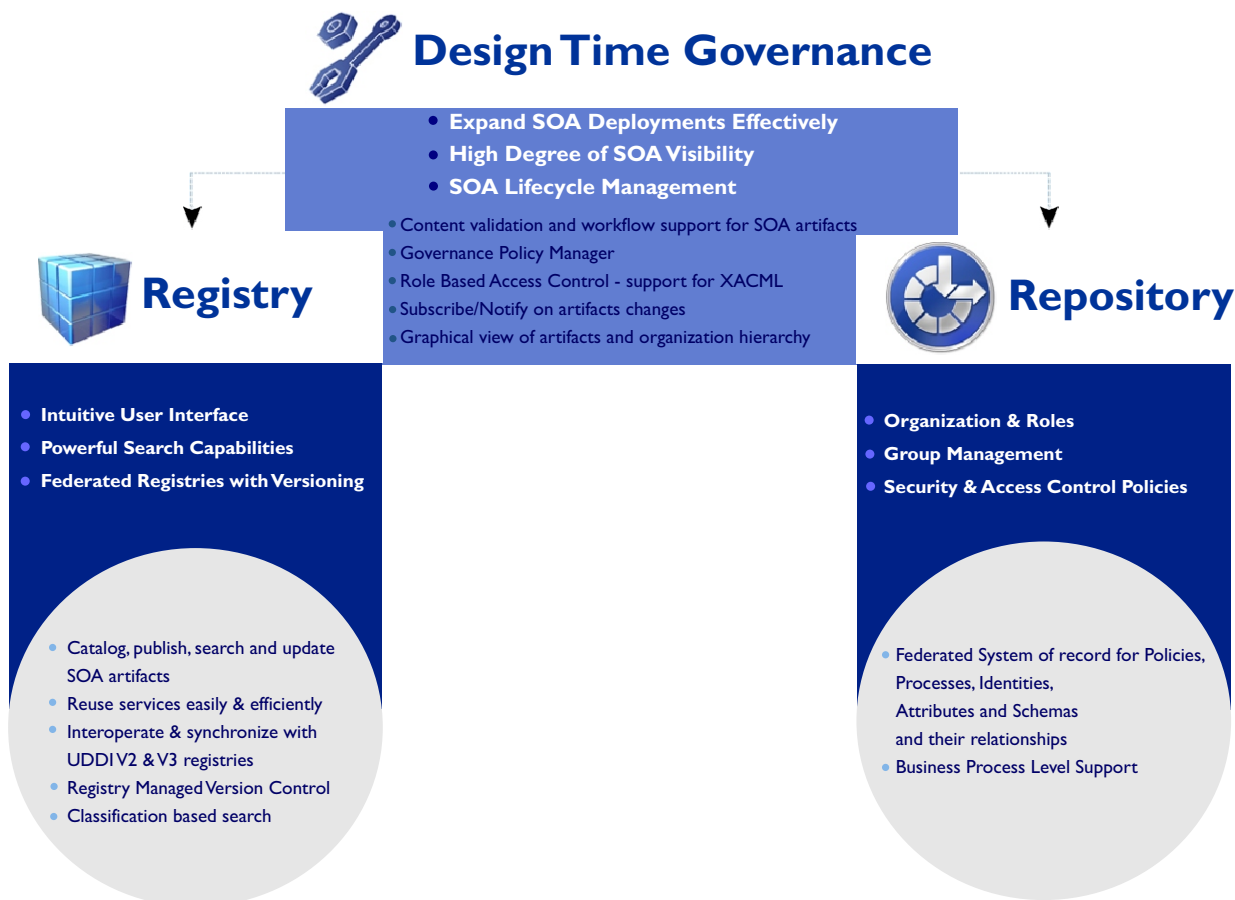
Service Oriented Architecture (SOA) Lifecycle Challenges

SOA has been widely adopted by enterprises because it has been accepted as a better and faster way to build composite applications from reusable services.

However, this new approach has associated challenges and problems related to visibility and control of artifacts which, if not addressed, have the potential to minimize the productivity or benefit that is realized from SOA or could even derail projects.

Developers and users of SOA artifacts such as services, business processes and schemas are typically spread across multiple departments or teams in an enterprise. In the absence of any control, these could be scattered leading to the following challenges:

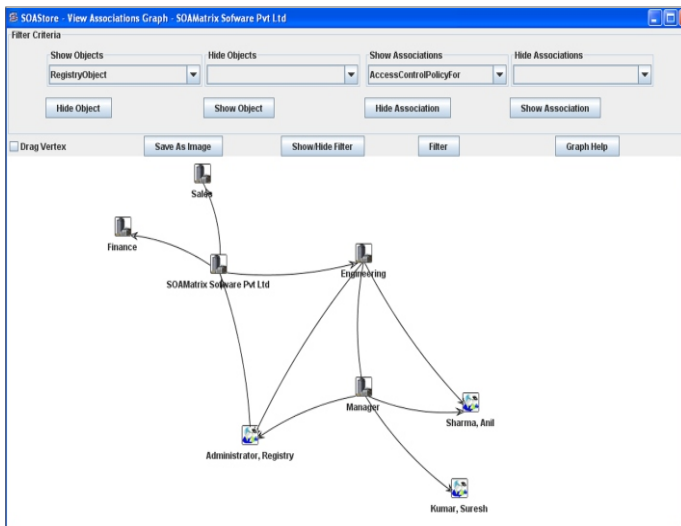
- ▶ Find availability of artifacts, their location, their interdependencies and any constraints on their usage
- ▶ Ensure that the artifact has been reviewed and tested thoroughly and has been approved for use
- ▶ Streamline workflow for effective artifact approval
- ▶ Maintain/manage versions of artifacts and also information regarding the versions that are approved or deprecated
- ▶ Inform the developers of the dependent artifacts that there are changes to an artifact. For example, if a service has been modified, developers of the processes dependent on it must be notified
- ▶ Ensure that a service is used only by those it is intended for such as specific individuals, teams, departments and so on



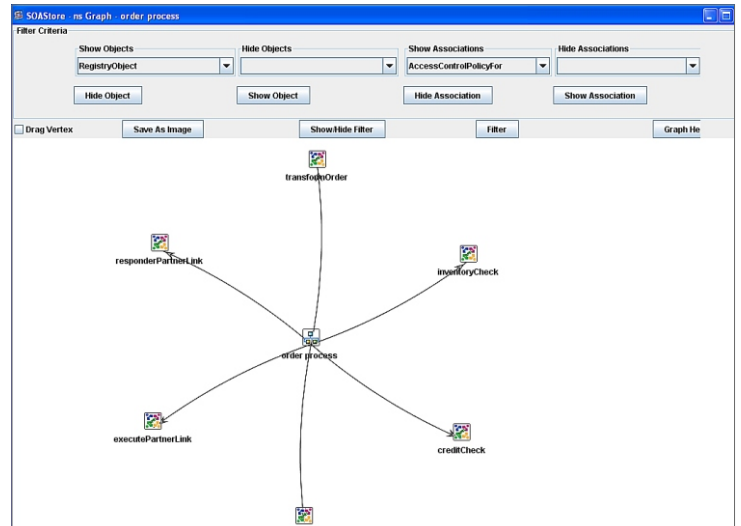
SOAStore Capabilities

Industry's most advanced SOA registry/repository offering

SOAStore registry and repository provides design time governance capabilities that enable organizations to define and enforce organizational policies governing the content and usage of the artifacts throughout their lifecycles. SOAStore offers functionalities that meet the growing requirements of today's SOA deployments.



Graphical View of Organization



Graphical View of Artifacts

Features

Expand SOA Deployments Effectively

Large organizations spanning multiple departments will have common services which can be reused effectively by avoiding duplication and saving valuable time in the process. SOAStore not only provides support for storing services but also for other SOA Metadata and artifacts like Process Definition (using BPEL), XML Schema, Access Control Rules and Business Policies.

Powerful Search Capabilities

Supports federated queries that enable users to discover information stored in multiple co-operating registries through a single search.

High Degree of SOA Visibility

SOAStore provides information about:

- ▶ SOA artifacts published and their associations
- ▶ Approved SOA artifacts
- ▶ Applicable governance policies and reports
- ▶ Access control policies

SOAStore provides functionality to:

- ▶ Subscribe to events of interest
- ▶ Notify changes to the repository items
- ▶ View the audit log that lists changes to an artifact

SOA Lifecycle Management

SOAStore registry supports the entire SOA lifecycle from design, development through pilot and production, enabling better control of the SOA infrastructure. SOAStore also supports approval workflows for artifacts. There is also an Eclipse plug-in with hooks to integrate SOAStore with any Eclipse based IDE. Users can also subscribe for events on selected artifacts and receive alerts and notifications.

Federated Registries with Versioning

Multiple registries refer to each other and referencing, synchronization and interaction with other registries happens seamlessly.

Organization, Roles and Group Management

This feature allows creation of a flexible hierarchy of organizations, departments and users and associated roles and groups. All of these could be viewed and created graphically and used while defining the access control policies.

The screenshot shows the SOAStore Registry Search interface. Key features highlighted with callouts include:

- Tabs for quick navigation:** Registry, Access Control, Governance Policy, Administration, Help.
- Registry Object Toolbar:** Home, Help, and user information (Administrator | Registry | Logout).
- Pre-defined query:** A dropdown menu for selecting predefined queries.
- Search Filters:** Fields for Name, Description, and Status (StatusType).
- Download search result in Excel and CVS format:** An EXCEL button and a Select Status dropdown.
- Graphical view of relation with other objects in registry:** A table of search results.

Object Type	Name	Description	Version
BPEL	bpel	Test Counter bpel	1.1
BPEL	responder bpel	Dyn Partner Responder bpel	1.1
BPEL	Dyn partner	Dyn partner bpel	1.1
BPEL	TestIf	Testif bpel	1.1
BPEL	MagicSession		1.2
BPEL	order process		1.2
BPEL	Test Activity Flow	Test Activity Flow bpel	1.1
BPEL	Order Fullfillment bpel	Order Fullfillment bpel	1.1

Registry Search

Security

Protects confidential information from unauthorized users and allows access to authorized users. Establishes fine grained access control policies using Access Control Manager and applies the policies to registry objects on a single click. Users are authenticated using username/password or LDAP.

Intuitive User Interface

SOAStore provides a graphical view of the SOA artifacts, their associations, dependencies and constraints in an editable form. The user can apply various filters to customize this view.

Business Process Level Support

Support for business processes, policies and reports that a Line of Business (LOB) user can relate to. This helps to better understand the SOA infrastructure.

Standards Compliance

SOAStore is compliant with all the major applicable standards such as JAXR, UDDI, ebXML, WS-I, XACML, BPEL 1.0, BPEL 2.0, WSDL 1.0 and WSDL 1.1.

The screenshot shows the Access Control Policy Manager interface. Key features highlighted with callouts include:

- Define multiple policies:** Multiple tabs for Policy Definition.
- Role / Group Based Access Control:** Fields for Users, Groups, and Roles.
- Allow / disallow multiple privileges:** A list of actions with checkboxes.
- Special set of attributes which makes complex access control policies possible:** Resource Attributes section.
- Add new policies to the set or refer to pre-existing policies:** Add New Policy and Add New Policy Reference buttons.

Features	SOAStore	BEA ALER	X-Registry	IONA Artix Registry /Repository
Loosely coupled architecture that allows interoperability	✓	✗	✓	✗
Standards compliant	✓	✗	✗	✓
Role based access control	✓	✓	✗	✗
Identity management	✓	✓	✗	✗
Active registry/repository	✓	✓	✗	✓
Service discovery and reuse	✓	✓	✓	✓
Versioning of artifacts	✓	✓	✓	✓
Integrates with SOA management, ESB and rest of SOA Stack	✓	✗	✗	✗
Customizable workflows at runtime	✓	✓	✗	✗
WS-* support	✓	✓	✓	✗
WS-I Compliance Check	✓	✗	✓	✓
Content based validation of artifacts	✓	✗	✗	✓
Business process level governance	✓	✗	✗	✗
Capture and maintain relations and references between SOA artifacts	✓	✗	✗	✓
Graphical view of the organization hierarchy, repository and relations between SOA artifacts	✓	✗	✗	✓
Custom filtering of the graphical view	✓	✗	✗	✓
Comprehensive design time governance	✓	✓	✓	✗
Custom grouping and custom classification of registry objects	✓	✓	✗	✗
Subscription, notification and auditing on changes to registry objects	✓	✓	✗	✓
Support for complex classification schemes on registry	✓	✓	✗	✗
Support for custom artifacts and association types	✓	✗	✗	✗
Co - operating / synchronizing with UDDI registries	✓	✓	✗	✓
Support for policies and custom reports	✓	✗	✗	✓
Total cost of ownership (TCO)	Low	Very High	High	High

✓ : Supported ✗ : Not Supported

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