

IBM WebSphere Service Registry and Repository
To support your business objectives



WebSphere® software



Providing a service registry and repository to help you get the most business value from your SOA.



Today's businesses are operating in demanding and complex environments. Businesses accumulate applications over time, many of which are isolated from one another, causing duplications in business processes, adding to complexity, contributing to significant maintenance costs and slowing time to market. Some businesses count their application portfolio in tens or hundreds. Large global enterprises can have tens of thousands of applications in their portfolios.

The hundreds or thousands of services (applications and processes) in a service oriented architecture (SOA) require management and governance to help in realizing the benefits of SOA, including service reuse and business flexibility.

Leaders in the deployment of SOAs are extracting operational and financial value from existing services by enabling them for Web services. They are also creating new value in the services that they're developing today by designing them for SOA deployment.

An SOA integrates applications to improve service levels. By integrating disparate functions of applications into connected services throughout an organization, SOA aligns your information technologies to your business objectives. SOA has the potential to drive business flexibility, performance and innovation. Maximizing this potential depends on how well you manage the services in your SOA throughout their life cycle.

Get the most out of your SOA

IBM WebSphere® Service Registry and Repository is an industrial-strength tool that helps you get the most business value from your SOA by enabling better management and governance of your services. It provides robust registry and repository capabilities and integrates with IBM SOA Foundation—an integrated, open-standards-based set of software, best practices and patterns for SOA. WebSphere Service Registry and Repository can be an essential foundational component of your SOA implementation.

Manage service metadata

WebSphere Service Registry and Repository enables you to store, access and manage information about the services in your SOA, commonly referred to as service metadata. You can use this information to select, invoke, govern and reuse services as part of a successful SOA. WebSphere Service Registry and Repository includes:

- *A service registry that contains information about services, such as the service interfaces, its operations and parameters*
- *A metadata repository that has the robust framework and extensibility to suit the diverse nature of service usage*

A critical component of your SOA

The robust capabilities of WebSphere Service Registry and Repository make it a critical deployment component of SOA projects. Capabilities support:

- *Reuse*
- *Flexible connectivity*
- *SOA governance*
- *Manage services*



Encourage greater reuse

The publish and find capabilities of WebSphere Service Registry and Repository help promote service reuse in SOA projects by providing greater visibility of and easier access to existing services. They also expose redundant or inefficient services.

For example, when a request-for-service need is approved, you can query WebSphere Service Registry and Repository searches to determine if the service is available. If a service exists, the service owner is contacted to approve the reuse of the service. If the service requires modification, the owner can choose whether to permit the alteration after doing an impact analysis with the metadata in the service registry and repository. If the alteration is approved, a new version of the service is published to WebSphere Service Registry and Repository, and a new owner can be designated to support and maintain it. Finally, if the service does not exist, a new service-development request is initiated and published in WebSphere Service Registry and Repository, and the community is informed to prevent duplicate efforts.



Enhance connectivity

The enrich capability of WebSphere Service Registry and Repository supports the use of registry and repository functions by the SOA runtime components. It applies to any component that needs to select a service endpoint at run time using the registry and repository functions to make the most-accurate selection possible.

WebSphere Service Registry and Repository also helps improve the agility of your SOA. It identifies users of metadata and notifies them when changes occur. Its role-based access (such as for an administrator, developer, architect or analyst) contributes to proper governance of your SOA.

For runtime environments, the service registry and repository enables dynamic, efficient and security-rich access to services information by enabling service-endpoint selection, service-availability management and policy enforcement.

For service-endpoint selection, an enterprise service bus (ESB) mediation looks up requester metadata and searches WebSphere Service Registry and Repository for candidate provider endpoints. The mediation applies a selection algorithm and routes the request to the selected endpoint. However, if the provider endpoint doesn't respond because of a failure, the ESB mediation can search WebSphere Service Registry and Repository for other services that might meet requirements and are approved for use. For policy enforcement, a policy-infrastructure component uses policies stored in the service registry and repository, and the request is either forwarded or rejected based on these policies.

Enable SOA governance

WebSphere Service Registry and Repository provides governance capabilities that can help you organize and discover services govern access and monitor service vitality. Because these capabilities span the entire life cycles of services, you can manage changes to services and create policies for publishing, using and retiring services.

For example, when you develop a service, its artifacts are stored in WebSphere Service Registry and Repository. The governance processes then promote the service from testing to production, and this is recorded in WebSphere Service Registry and Repository. After the service has been deployed and used, the governance processes can determine when the service is no longer needed and retire it, without affecting subscribers. Metadata in WebSphere Service Registry and Repository is used to assess the impact of changes to services.

Help manage services

Management capabilities available with WebSphere Service Registry and Repository enable you to manage service-metadata information, as well as service interactions, dependencies and redundancies. You can classify services into meaningful groupings based on business objectives, manage policies for service usage, and monitor how services are changed and versioned. And you can analyze service usage, history and business impact to promote and encourage optimal service usage.

For example, after a service is developed and deployed, WebSphere Service Registry and Repository shares service data with other operational data stores. You can determine how services are going to be used and how they interact—and indicate these parameters in the repository. Then, WebSphere Service Registry and Repository can keep you informed if services perform outside these parameters, enabling you to more effectively monitor and manage quality-of-service objectives.

Service-enable your CICS applications

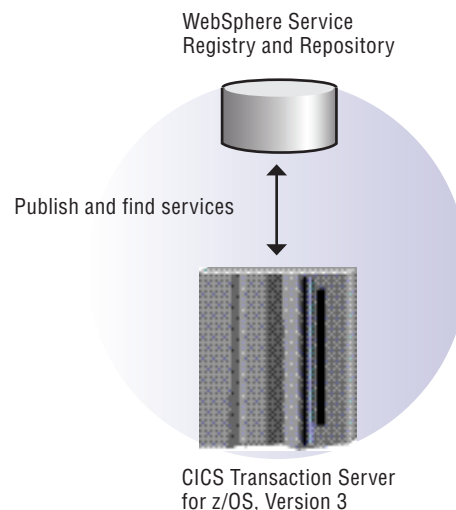
Now you can enable IBM CICS® Transaction Server for z/OS®, Version 3 to publish and retrieve Web Service Description Language (WSDL) files to and from WebSphere Service Registry and Repository. WebSphere Service Registry and Repository enables you to:

- *Publish and retrieve WSDL files from the CICS Transaction Server for z/OS environment to WebSphere Service Registry and Repository, where they can be accessed by other Web applications.*
- *Retrieve WSDL files from WebSphere Service Registry and Repository to the CICS Transaction Server for z/OS environment, where they can be modified and “reverse engineered” into new CICS-application, high-level-language (HLL) structures.*



CICS Transaction Server for z/OS aligns fully with SOA principles. CICS applications can act in the role of both service provider and service requester, allowing you to transform an existing CICS application into a Web service. A CICS application can issue a single CICS command to use a Web service provided by any external provider. This flexibility removes virtually any constraint on how you can reuse your CICS applications as services—and vastly broadens your ability to design new solutions based on existing CICS functionality.

Web services created from CICS transactions can be entered into the WebSphere Service Registry for use across an SOA as well as for discovery and incorporation into applications anywhere. CICS implements support for the WebSphere Service Registry and Repository API through a support pack CA1N so that Web services can be called dynamically from within CICS applications.



WebSphere Service Registry and Repository support for CICS Transaction Server for z/OS

Playing a vital role in IBM SOA Foundation

WebSphere Service Registry and Repository plays a major role in the SOA life cycle.

Model

During service modeling, you can use WebSphere Service Registry and Repository to create or reuse service taxonomies, vocabularies and XML schemas.

Assemble

During service development or assembly, you can use WebSphere Service Registry and Repository to locate services for reuse and to enable service composition, such as creating new applications and services from existing ones.

Deploy

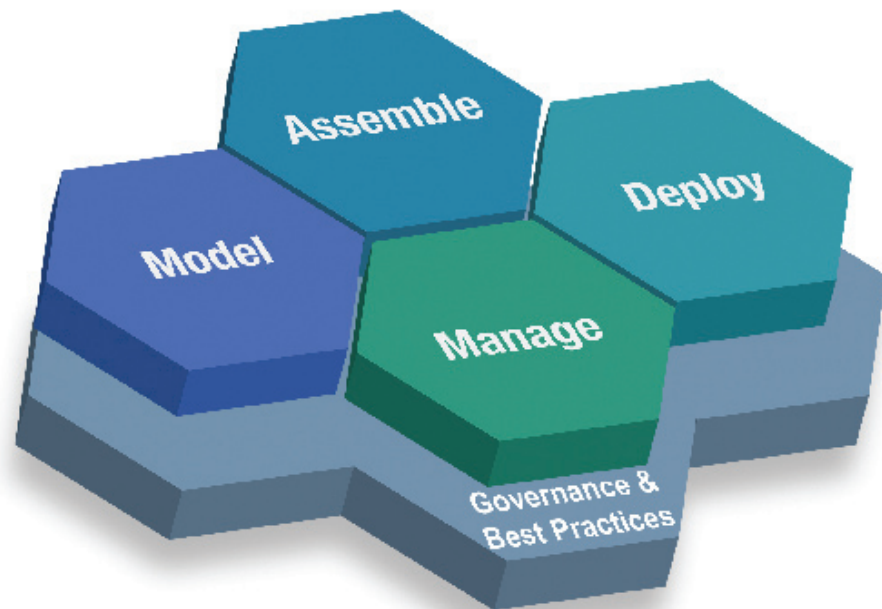
When your SOA is deployed, runtime environments, such as an ESB, use the metadata published in WebSphere Service Registry and Repository to enable endpoint selection, resolution and policy enforcement. This capability enables you to dynamically optimize service interactions in your SOA.

Manage

WebSphere Service Registry and Repository can help you capture and assess the performance of services against business- and operational-performance objectives when managing services that leverage:

- *System-management practices, such as Information Technology Infrastructure Library (ITIL) processes.*
- *Change- and configuration-management databases (CCMDBs) that store information about service interactions, such as mediations.*

The service registry forms the core that feeds the overall SOA governance technology that underpins the SOA framework and helps you manage your overall SOA infrastructure.



WebSphere Service Registry and Repository can be a critical component in the SOA life cycle



Addressing your challenges

Through its integrated registry and repository, WebSphere Service Registry and Repository provides a complete and integrated set of capabilities in a single component, keeping repository artifacts in sync with their metadata. This integration, combined with robust registry and repository capabilities, results in ease of use, fast time to value and high performance.

A valuable component of your SOA

Today, most service registries provide basic publishing and discovery of service descriptions. Some solutions might offer basic repositories, but they do not address the overall service metadata aspects in a repository. They typically do not include governance capabilities that enable you to manage the end-to-end life cycle of all of your services artifacts.

WebSphere Service Registry and Repository overcomes these deficiencies. Its robust, industrial-strength capabilities help you efficiently manage access to and governance of services. Standard registry and repository functions for the entire software life cycle, well integrated with IBM SOA Foundation, make WebSphere Service Registry and Repository a valuable component of your SOA.

Regardless of the level of SOA maturity in your enterprise, WebSphere Service Registry and Repository can bring immediate benefits that can help accelerate your adoption of an SOA approach.

For more information

To learn more about IBM WebSphere Service Registry and Repository, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/software/integration/wsrr

To learn more about IBM SOA Foundation and the SOA life cycle, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/soa

To learn more about IBM SOA Governance, visit:

ibm.com/soa/gov

To join the Global WebSphere Community, visit:

www.websphere.org



© Copyright IBM Corporation 2007

IBM Corporation
Software Group
Route 100
Somers, NY 10589
U.S.A.

Produced in the United States of America
08-07
All Rights Reserved

CICS, IBM, the IBM logo, System z, WebSphere
and z/OS are trademarks of International
Business Machines Corporation in the United
States, other countries or both.

Other company, product and service names may
be trademarks of service marks of others.