IBM WebSphere Service Registry and Repository Version 7

Improve Business Agility through service visibility and governance to maximize return on service assets

Highlights

- Ensure awareness of available applications, services and documents throughout the organization by publishing and finding them quickly, reliably and flexibly.

- Mitigate business risk by providing proven, high-quality, and resilient services as building blocks for mission-critical business applications and processes.

- Speed time to market, increase resource utilization and improve collaboration by governing the life cycle of services from creation to consumption.

- Quickly align business goals with IT and implement recommended practices by enabling consistent enforcement of operational and life-cycle governance policies.

- Address security needs and control access to applications, services and documents based on customizable roles and rights.

Service visibility and governance

Today's dynamic business environment as well as on-going economic uncertainty means organizations must work smarter to remain competitive and respond to changing customer demands. Key goals to working smarter are improving business agility and driving cost optimization. In order to achieve these goals, organizations need to eliminate costly redundancies, promote reuse of existing services and make sure those services are secure, reliable and of high quality. IBM WebSphere® software provides enterprise architects, IT and operations managers and software developers with customizable, scalable and automated service visibility. It also provides the governance solutions that enable customers to manage, trust and secure services and documents in an SOA environment. As a result, organizations can rapidly bring new services to the market, reduce business application risk, increase staff productivity, and lower maintenance costs while maximizing return on their service assets. Service Visibility and Governance helps customer achieve their goals of improved business agility and cost optimization.

WebSphere Service Registry and Repository

IBM WebSphere Service Registry and Repository (WSRR) V7 supports the SOA life cycle of model, assemble, deploy and manage, including design time and runtime service visibility and governance. Version 7 focuses on the need for an enterprise-level registry and repository in conjunction with an Enterprise Service Bus, or ESB, and assists in moving to newer technologies such as Business Process Management (BPM), Cloud and other service-oriented environments.

As part of IBM's comprehensive service visibility and governance solutions, WSRR helps organizations eliminate costly redundancies, promote reuse of existing services and supports creating services that are security-rich, reliable and of high quality. It focuses on how to optimize productivity and resources in an SOA environment, and can provide:

- A robust solution for gaining visibility and governance of virtually all service-related information, including ownership, funding, usage, location and policies.
- The ability to interface with a large number of scalable, standards-based IBM and non-IBM products to support information across the organization.
- Federation with both enterprise service bus (ESB) and registry environments to allow sharing of information between design, development, deployment, run time and operations.
- Governance support for implementing a SMART SOA™ approach.

Numerous customer and analyst studies have shown that SOA Governance and WSRR are critical for successful SOA deployments

Manage what you have, no matter where:
Store, access and manage information to support a successful SOA

WSRR helps ensure awareness of available applications, services and documents throughout the organization and helps optimize governance and management capabilities so you get the most business value from your SOA. It facilitates storing, accessing and managing service metadata so that you can easily select, invoke, govern and reuse your services. A key factor in SOA success is the amount of service reuse achieved. Good governance is a key to achieving service reuse, and governance requires a registry.

| Publish | Find | Enrich | Manage | Govern |

WebSphere Service Registry and Repository high-level functionality

Support an end-to-end service life cycle

By creating user-definable entities and customizing the service life cycle, you can configure WSRR precisely according to your business needs. This can minimize critical outages and inefficiencies by helping to manage and automate service upgrades. WSRR supports tracking of service metadata as it makes its way through its governed life cycle, including approvals, deprecation and retirement in development, testing, staging and production environments. You can easily implement best practices for service life-cycle management with the ability to upgrade and promote services and associated metadata based on life-cycle stages.

Provide federation with other SOA repositories

To help break organizational silos, WSRR can federate with a number of products to enable service governance and management of the complete service life cycle. At the model and assemble phases, WSRR is complemented by IBM Rational® Asset Manager, which specializes in managing software development artifacts. For example, WSRR supports federated search and publish with Rational Asset Manager, which manages bundles of artifacts describing reusable assets in the software development life cycle.

In deploy and manage phases, WSRR can work with a configuration management database (CMDB) to acquire and manage detailed information about the environment and topology in which service endpoints run. WSRR integrates with Tivoli® Change and Configuration Management Database (CCMDB) working together to enable users to get detailed information about the environment and runtime status of a service. Tivoli CCMDB users can obtain detailed descriptions of the shape and semantics of service endpoints from WSRR.

Enhance impact analysis and change management
Registry and repository federation between WSRR and IBM Tivoli Change and Configuration Management Database (CCMDB) supplies federated impact analysis and change management capability. Users can view service operations and performance information through WSRR to help break organizational silos through a seamless and comprehensive view of service information. It also provides the ability to perform impact analyses based on federated data from both WSRR and CCMDB, and allows an SOA and WSRR user to view combined WSRR and CCMDB service-related data. The user can then implement needed changes by issuing CCMDB commands from WSRR.

Trust existing services, accelerate reuse and cut costs:
Easily publish and find services
To mitigate business risk and provide proven, high-quality and resilient services, the publish and find capabilities of WSRR promotes service reuse in SOA projects by providing greater visibility of and easier access to existing services and assets. These capabilities also expose redundant or inefficient services.

For example, when a request for service is approved, a query to WSRR searches to determine if the service is available. If a service exists, the service owner can be contacted to approve the reuse of the service. But if the service requires modification, the owner can choose whether to permit the

alteration after analyzing the impact of those changes. If the alteration is approved, a new version of the service is published to WSRR adopting the service versioning life-cycle governance.

Finally, if an appropriate service was not found during the initial search, a new service development request can be initiated, and the new service, when available, is published to WSRR.

Incorporate business space user interface and analysis tools
To assist in quickly aligning business goals with IT, WSRR V7 includes a new business space user interface and analysis tools to provide a proven, easy-to-understand user interface for business and IT users. This helps to minimize critical outages and inefficiencies by monitoring and tracking service upgrades and service-level expectations. It takes advantage of IBM's proven business space functionality to support data visibility, and puts data in easy to read business-based graphical format. It allows service-related analysis with standard business space widgets to assess service reuse, service consumption, service submission and life-cycle tracking.

Secure mission-critical services and documents:
Provide SOA policy monitoring analytics
SOA policy monitoring analytics can help reduce complexity and lower costs related to securing services and applications. It provides internal analysis within WSRR related to service governance enforcement policies, service compliance and service life-cycle phases, along with service-level agreement monitoring.

Increase visibility with service federation management console
WSRR V7 provides a new service federation management (SFM) console to better track service reuse across multiple SOA domains. This capability reduces complexity and can lower cost of securing service with a scalable, standards-based solution. SFM extends the reach of SOA in addressing end-to-end business solutions by maximizing service reuse

across heterogeneous enterprise domains (including non-IBM implementations) using federation for both ESBs and repositories. The SFM console provides visibility across these federated domains allowing the user to see the services hosted in another domain.

Incorporate ATOM feeds
ATOM feeds provide richer Web 2.0 interactions, can reduce complexity, lower integration costs and improve the ability to correlate service information based on standards-based solution. ATOM feeds provide a way to aggregate data from multiple sources, including the Web and data analysis, and can provide the information to a service.

Support for entire SOA infrastructure
WSRR is a key product for any secure SOA implementation and sits at the center of the overall SOA infrastructure. It can help achieve and maintain regulatory compliance with policy enforcement and auditing capabilities by provides runtime support with a number of other products, including WebSphere DataPower®, WebSphere ESB, Rational Team Concert™, Rational Build Forge®, Tivoli Composite Application Manager for SOA and Tivoli Security Policy Manager.

Summary:
Business benefits of WSRR
We have shown how the implementation of WSRR can address the goals of improved business agility and cost optimization. WSRR addresses a number of business challenges, including:

- Improve business agility by increasing service visibility
- Provide cost optimization based on service reuse
- Reach service-level agreements by utilizing registry/ repository federation
- Take advantage of new business environments and respond to opportunities quickly
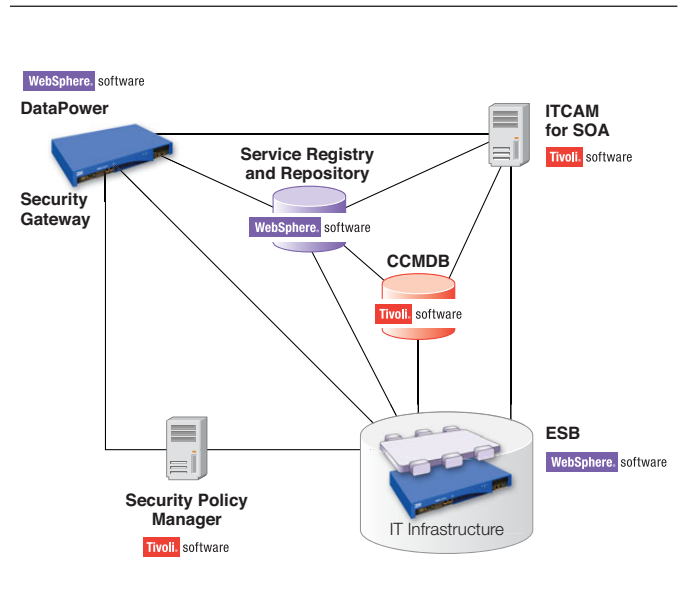
WSRR Runtime Environment

IT benefits of WSRR
SOA is about business and IT alignment, and WSRR provides IT with a number of key benefits:

- Track, measure and improve risk and compliance management with organizational and industry policies
- Better manage service assets and services across SOA domains
- Accelerate SOA adoption by integrating services life cycle with IT operations life cycle and process management
- Improve productivity through enhanced user interfaces and performance

IBM WebSphere Service Registry and Repository at a glance

Hardware requirements:

- IBM AIX®: IBM System p® servers
- HP-UX: Hewlett-Packard HP-9000 systems
- Linux® on Intel®: 32-bit Intel PC hardware
- Linux on IBM POWER®: IBM PowerPC® and IBM POWER5™
- Linux on System z®: System z processor
- Sun Solaris Operating Environment: Sun SPARC processor systems
- Microsoft® Windows Server 2003, 2008, Vista: x86-compatible PC hardware
- IBM z/OS®, V1.9 or V1.10: any compatible server

Software requirements:

Server platforms

- IBM AIX 5.3 TL7™, V6.1 TL1
- HP-UX 11i v2 IA64, V3 IA64
- Microsoft Windows® 2003 R2, 2008, Vista Server Standard and Enterprise Editions (32 bit)
- Red Hat Enterprise Linux AS, V 5.0
- Sun Solaris Operating Environment 10 SPARC
- SUSE Linux Enterprise Server 11.0 x86-32, 10.0 System z, SLES 9.0 SP4 on System i®/p/z/x86-64
- z/OS 1.9, 1.10 System z

Repository databases:

- IBM DB2 Universal Database™ Enterprise Server Edition, V 9.1 with Fix Pack (FP) 5, V9.5 with Fix Pack 1 or later, V9.7 (supplied with WebSphere Service Registry and Repository)
- DB2® for z/OS V8, V9 or V9.1 (z/OS only)
- Oracle 10g Standard/Enterprise Release 2 (10.2.0.4), Oracle 11g Standard/Enterprise Release 1 (11.1.0.6)
- Microsoft SQL Server Enterprise 2005 SP2, SQL Server Enterprise 2008 (Windows only)
- Apache Derby 10.3 (IBM Cloudscape™)

Application servers

- IBM WebSphere Application Server Network Deployment, V7.0 with Fix Pack 7 or later installed

For more information

To learn more about IBM WebSphere Service Registry and Repository Version 7, contact your IBM representative or IBM Business Partner, or visit: www-01.ibm.com/software/integration/wsrr/index.html

To join the Global WebSphere Community, visit: www.websphere.org