



# Service Oriented Architecture Infrastructure

*Business agility through service virtualization*

Experience the benefits of the Microsoft SOA Infrastructure.

Microsoft Services SOA Infrastructure provides:

- Reduced time-to-market for new services.
- Advanced service versioning.
- Service policy enforcement.
- Service enablement of legacy systems.

Enterprise IT departments are managing increasingly complex technology portfolios. Yet as their business needs change, these departments must ensure that their systems and applications continue to support the business goals of the organization. Failure to do so compromises the effectiveness of IT initiatives and limits the organization's overall agility. Today, many enterprises are taking advantage of the benefits of service orientation through the adoption of Web services, but over time, as requirements evolve and expand, their value and benefits start to degrade.

Web services have allowed organizations to cross boundaries, and they facilitate better integration because their purpose is to address interoperability challenges. However, they do not help an organization accommodate the dynamics of change because their purpose is not to address agility challenges. Fortunately, when executed correctly, service oriented architecture (SOA) can help address this gap by coordinating distributed IT resources into a cohesive system that breaks down information and functionality silos to maximize organizational agility. This agility translates into a reduced time-to-market for new business solutions and an ability to absorb and support evolving requirements and priorities.

The Microsoft® Services SOA Infrastructure solution provides the agility organizations require by adding coordination, visibility, and manageability of services to the benefits of interoperability through service virtualization. With service virtualization, it is possible to apply different service facades and policies to your data and logic to provide the right service for the right scenario. While dynamically exposing and brokering services, the SOA Infrastructure solution can also use a common infrastructure to provide the visibility and manageability necessary to make massively distributed systems successful in the enterprise. Through this virtualization approach, the Microsoft SOA Infrastructure solution can help your organization deploy services faster, embrace changes as they occur, and maximize the reuse of system and infrastructure components.

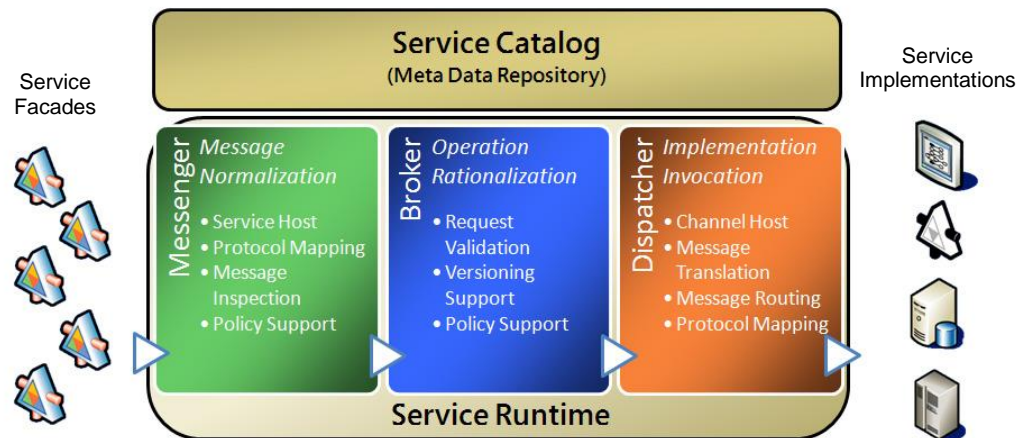
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## Service Virtualization

Service virtualization is an approach to defining and supporting services at run time; it provides the common capabilities required for governance and management across the organization. The Microsoft Services SOA Infrastructure solution provides service virtualization through an architecture that uses metadata to define service behaviors that are interpreted at runtime to provide core capabilities such as versioning, protocol mapping, management, routing, and run-time policy enforcement. This lets developers focus on building new functionality and provides a foundation on which you can deploy reusable infrastructure capabilities that are available across all services. Built upon the Microsoft server platform (which includes the Microsoft Windows 2003 operating system, Microsoft SQL Server® 2005 database software, and Microsoft .NET Framework 3.5), it takes full advantage of the capabilities in the underlying infrastructure to provide a reliable and scalable platform on which an organization can build its SOA system in heterogeneous environments.

The SOA Infrastructure solution can also take advantage of Microsoft BizTalk® Server 2006 R2 to provide additional capabilities for your SOA such as business activity monitoring (BAM) for end-to-end visibility, business rules engine (BRE) for dynamic policies, host system integration for service assisting legacy systems, and enterprise service bus (ESB) guidance for durable message routing

### SOA Infrastructure - Architecture



## Dedicated and Determined to Deliver

Microsoft Services is at the forefront of what's possible with Microsoft technology. We are determined to realize and support your business vision. We deliver solutions that have impact, through integrated relationships with you, our partners, and teams across Microsoft.

## Service virtualization to promote true loose-coupling.

Microsoft Services SOA  
Infrastructure allows  
independent ownership of  
each layer:

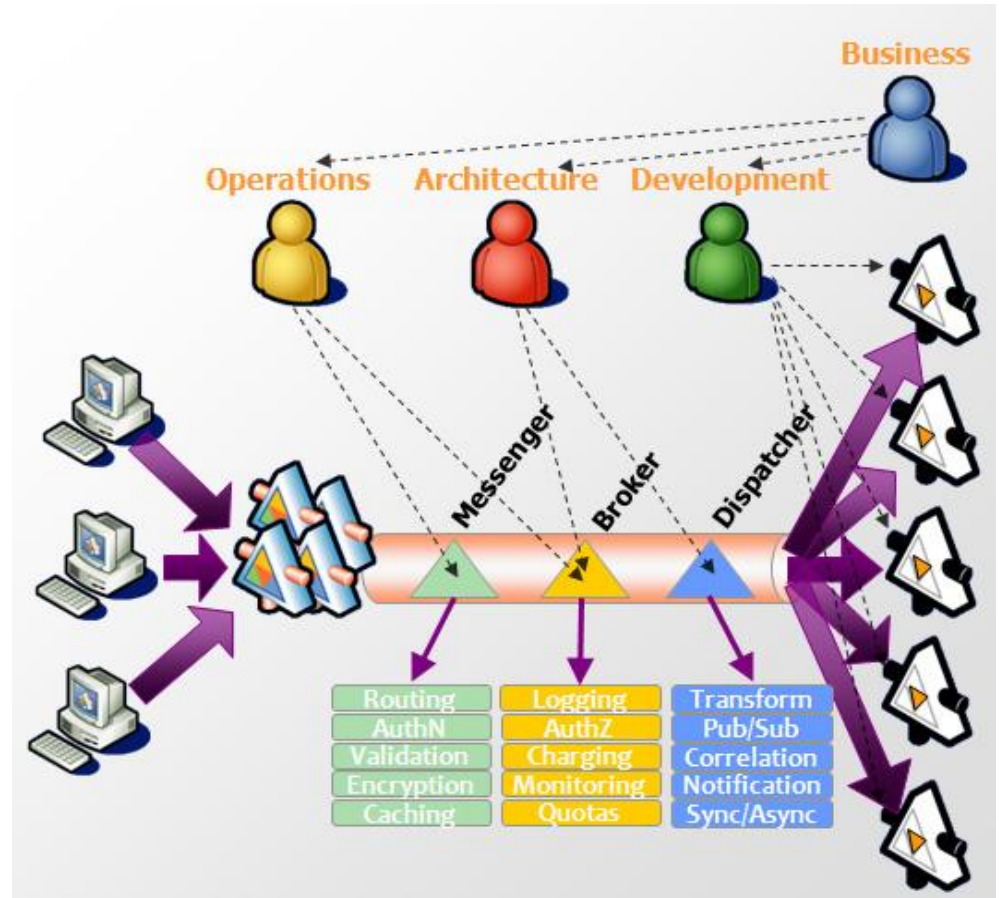
- Operations can dictate endpoint policies and messaging standards.
- Architecture can influence service policies and define execution patterns.
- Development can develop service interfaces and logic.
- Business owners can dictate business policy and requirements.

## Service Oriented Architecture Infrastructure Tenets

1. Service virtualization to promote coordinated loose-coupling  
Take loose coupling down to the business-function level to provide services based on business decisions, not arbitrary technical boundaries
2. Services managed as components of a single, cohesive system  
Instead of treating services as silos, embrace them as part of the IT system to promote consistency and visibility across all service initiatives
3. Service lifecycle support for enterprise roles  
Empower the many roles that will interact with the resulting distributed system to provide control of their areas and visibility into others they depend upon

The SOA Infrastructure Offering has been deployed in a variety of industries, such as telecommunications, travel, healthcare, and education. With endpoints, protocols, contracts, and policy defined through configuration, you can take an existing service implementation and create a dozen variations in mere minutes with no coding. Conservatively, time and effort using the SOA Infrastructure tools is easily 25 percent of what it would take using traditional methods.

SOA Infrastructure Solution Potential  
Concerns by Layer



### Key benefits include:

- **Reduced time-to-market for new services**--The Microsoft Services SOA Infrastructure solution provides the capability of quickly building service interfaces and exposing those to the consumer through skeleton implementations while the actual implementation is still in development. This allows you to implement and test consuming applications and systems once the interface contract is established.
- **Service versioning**--In an enterprise SOA environment, services will change as they evolve. Services are subject to two types of changes in the interface and in the implementation. The challenge is finding a way to accommodate service evolution while minimizing the effect of those changes on the consumer. SOA Infrastructure tackles this problem by supporting version control at the service operation level. You are able to host multiple versions of the operation at an endpoint, while you control which version is published and therefore discoverable by new service consumers. This separation of execution and discovery is just one of the benefits of service virtualization realized through the SOA Infrastructure.
- **Service policy enforcement**--With SOA Infrastructure, policy enforcement can be decoupled from service development so that policies can be created and applied independently of how the services are developed. SOA Infrastructure supports an extensible policy model built upon WCF behaviors with XAML-based declarations. These policies can provide enforcement of a wide range of topics including security, performance tracking, and business activity monitoring. These policies can be enforced at the endpoint level to affect all the service operations available at that endpoint or at the service operation level where only that particular service operation is affected.

## Experience You Can Count On

Let Microsoft Services help you pinpoint your SOA-related strengths and areas for improvement with tools and processes evolved over years, with real customer SOA experience.

For more information about consulting and support offerings from Microsoft, contact your Microsoft Services representative or visit [www.microsoft.com/services](http://www.microsoft.com/services).