Chapter XI

Web Services in Service-Oriented Architectures

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Abstract

There is little debate in either corporate or academic circles that Web services comprise a large part of the next technological wave. Clearly, Web services will be instrumental in building service-oriented architectures that integrate disparate systems, both within organizations and across business partners’ firewalls. The question is not if, or even when, to implement Web services—it is how.

Introduction

According to nearly every industry pundit, including those from ardent competitors such as Sun Microsystems, IBM, and Microsoft Corporation,
integration of systems is critically important for most enterprises. The ability to quickly assimilate and aggregate large amounts of information from disparate systems can mean the difference between life and death for an organization. Ease of access by customers, seamless supply chain management with business partners—these are quickly becoming the only distinguishing factors in an increasingly commoditized marketplace.

One of the problems with integrating computer systems is the incredible complexity and associated cost of doing so. Many systems are old and scantily documented; still others are proprietary with no natural hooks into their data. And these are just problems that exist within a company’s firewall—imagine how the complexity increases as an enterprise begins integrating its systems with those of its business partners and customers, with the added security ramifications brought on by Internet communications!

The sheer number of interconnections is another problem. Companies have many systems—the alphabet soup of ERP, HR, CRM, SCM—each with many constituents. The geometric complexity of all these interconnections begins to stagger the imagination. It is no wonder that so many integration efforts fail to bring about promised savings or other business benefits.

Figure 1. The complexity of integrating systems
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