

Building and Managing Adaptive e-Business Solution Infrastructure

David L. Cohn

*Director, e-Business Solutions & Autonomic Computing
IBM T. J. Watson Research Center*

With the advancement of information technology and business transformation, and to increase profits from its value chain, an enterprise has to be able to rapidly modify and adapt its business process and collaboration infrastructure. Business Process Integration and Management is the key to building and managing an adaptive e-business solution infrastructure.

As an enabling technology of business process integration, Web services provide a standardized means to allow heterogeneous applications to communicate with one another. The standard interface description language and communication mechanism of Web services is employed to build a modularized and adaptive e-business infrastructure that supports evolving business environments. In this talk, I will introduce a reference integration architecture and then illustrate how Web services is used for enabling business service discovery, business service invocation, solution templates, and business process composition.

In order to make an e-business solution infrastructure more stable, robust and adaptive, I will discuss new and emerging autonomic computing techniques that efficiently manage the infrastructure at both IT level and business process level. I will conclude by presenting some challenging research topics that will enable our vision of *e-business on demand*.