

Web Services Event Standards Take Big Step Forward

Roy W. Schulte, Massimo Pezzini

Web services have lacked a standard for event notification. Now, two proposals for just such a standard have emerged within the space of two weeks. But unless the two vendor camps get together, users won't benefit much.

NEWS ANALYSIS

Event

On 20 January 2004, Akamai, The Globus Alliance, Hewlett-Packard, IBM, Sonic Software and TIBCO Software proposed two new Web services specifications. The first, WS-Notification, seeks to provide a standards-based means of publish-and-subscribe message delivery. The second, WS-Resource Framework, is actually a set of three standards that collectively describe a way to describe, access and then clean up after expired resources, such as a contract. WS-Resource Framework is intended to make grid resources accessible as Web services and to enable better manageability of the resources.

On 7 January 2004, BEA Systems, Microsoft and TIBCO also published a specification for a Web services publish-and-subscribe standard, known as WS-Eventing.

Analysis

Publish-and-subscribe communication has been an important omission in Web services standards. But now, vendors are moving faster than expected to standardize the basic publish-and-subscribe design pattern in a Web services manner, based on Simple Object Access Protocol (SOAP). Based on the newly proposed WS-Eventing and WS-Notification specs, publish-and-subscribe standards could be ratified as early as mid-2005 — although major challenges still exist.

IBM and Microsoft have jointly developed many important Web services standards during the past three years, starting with their cooperation on SOAP and continuing through WS-Reliable Messaging in early 2003. It is significant that these vendors have not yet been able to get together on this spec because it could mean the beginning of the end of consensus between IBM and Microsoft, as well as new major Web services standards. It could also mean that only those standards that are already under way will be finished.

This situation is a real acid test for the standards-setting process. The IBM group says that these two proposed specs can and will be converged and that it will work with Microsoft and BEA to help make this happen. However, it remains to be seen if the groups can actually compromise enough. If they can get together, Web services will take an important step toward more interoperability. If they don't, then Web services may be at a plateau, and interoperability could be stuck at a fairly primitive level.

TIBCO is the only vendor to participate in both specs — a fairly unusual occurrence, but a hopeful sign that maybe these two specs have a better chance of converging. If the two groups can converge the basic publish-and-subscribe specs, it would provide a foundation to later standardize more advanced aspects of event-driven computing. For now, neither of the new specs includes durable subscription or complex event processing features. Nor are either of the specs as complete as JMS, the Java Message Service specification, which does not cover Web services but which, up to now, has been the only multivendor standard available for publish-and-subscribe messaging.

If IBM, Microsoft and the others can come to terms and converge their two proposals, it will help accelerate the adoption of event-driven architectures. If not, the standardization of publish-and-subscribe communications and event-driven computing and the forward progress of Web services standards, in general, will suffer. Developers of new publish-and-subscribe Web services applications must continue to design their own custom publish-and-subscribe mechanisms using

standard SOAP messages for about 18 more months. We expect that vendors will support the new standards in their Web services software platforms beginning in 2H05 (0.7 probability).

Analytical Source: Roy Schulte and Massimo Pezzini, Gartner Research

Recommended Reading and Related Research

- "The Growing Role of Events in Enterprise Applications" — Focuses on the concept of events, which will enable revolutionary improvements in business processes and application systems during the next five years. **By Roy Schulte**
- "Event-Driven Architecture Complements SOA" — Helps architects and developers understand when a service-oriented architecture (SOA), an event-driven architecture or some combination of the two is the right approach. **By Roy Schulte and Yefim Natis**

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REGIONAL HEADQUARTERS

Corporate Headquarters
56 Top Gallant Road
Stamford, CT 06902-7700
U.S.A.
+1 203 964 0096

European Headquarters
Tamesis
The Glanty
Egham
Surrey, TW20 9AW
UNITED KINGDOM
+44 1784 431611

Asia/Pacific Headquarters
Level 7, 40 Miller Street
North Sydney
New South Wales 2060
AUSTRALIA
+61 2 9459 4600

Latin America Headquarters
Av. das Nações Unidas 12.551
9 andar—WTC
04578-903 São Paulo SP
BRAZIL
+55 11 3443 1509