INTERNATIONAL
Systems Group, Inc.

When SOA Is Not Enough – Achieving Agility Through Business Event Processing

2-day seminar

Give Your Business the Competitive Edge

Companies have been constantly reducing their response time to events that affect their business. For example, customers expect immediate action when they have a service inquiry, the turn around time for orders is being minimized, and fluctuations in supply and demand often mandate instantaneous changes to business processes. This move towards (near) real-time business operations has been referred to as the "Zero Latency Enterprise (ZLE)", or the "Real Time Enterprise (RTE)". While these business changes have evolved, IT has also been evolving, and today a number of factors come together that can enable IT to propel the business much closer to the RTE.

On one hand, many business applications have been integrated in a (near) real time fashion, such that important events can be propagated throughout the enterprise. In addition, the event streams that are flooding companies are rapidly increasing, e.g. due to growing usage of RFID. Although Service Oriented Architecture (SOA) has captured large mindshare, for many IT organizations it has been materializing as a new way of request/response style client/server computing. This is clearly not enough if one wants to manage a universe of asynchronous events. That's why we see a resurgence of Event Driven Architecture (EDA), which addresses the need for asynchronous event processing.

On the other hand, new technologies are becoming available that can turn a stream of events into valuable – and actionable – information for business users. These technologies include Complex Event Processing (CEP), which allows applying business rules to streams of real time events, including temporal correlations. Another technology, Business Process Management (BPM) has been around for a while, but takes on new significance since it can now automate the actions that the event processing produces as a result. Finally, Business Activity Monitoring (BAM), which provides a business user with insight into the performance of the business, has recently seen increased adoption across different industries and complements CEP and BPM.

These technologies and solutions are collectively referred to as "Event Processing", or also "Business Event Processing (BEP)". According to Forrester, BEP "is the process of capturing real-time business events from multiple sources and assigning them to the appropriate decision-maker for resolution based on the business context of the events". Gartner Group thinks that these technologies "represent a fundamental shift in the way companies view, monitor and act upon business or technical events".

From Event Infrastructure to Business Value

This seminar will give you insight into building the different layers that are required in order to make BEP successful in your company. It explains how to approach defining a BEP architecture, including a comparison between SOA and EDA, and when they are applicable. The seminar then addresses laying a foundation for integrating application events and data events. The key technologies that comprise BEP, namely Complex Event Processing (CEP), Business Process Management (BPM), and Business Activity Monitoring (BAM) are discussed, followed by an overview of the standards that are playing a role in this field.

This seminar moves beyond just the technology discussion – our instructors will share their experience with setting up processes across an organization that provide lasting value and guarantee the long term success of BEP initiatives.

Benefits of Attending

- Identify the requirements that typically lead to adopting a BEP approach.
- Understand key BEP standards and technologies.
- Learn about the challenges of traditional, client/server based Service Oriented Architectures and how they contrast to Event Driven Architectures.
- How to lay the foundation (or exploit an existing integration infrastructure) in your company that is required for capturing and managing business events.
- Understand the relationship between CEP, BPM, and BAM.

Who Should Attend

- IT Managers that need to understand what BEP comprises and how the BEP technologies and standards stack up
- Architects who want to define a Business Event Processing architecture to facilitate successful BEP projects.
- IT professionals who need to see when and how SOA or EDA can be applied.
- IT Managers and IT Strategists selecting new standards and technologies.
- Consultants who need to recommend different strategies for defining and implementing BEP solutions.

Prerequisite: This class does not require attendees to posses detailed knowledge in any specific technology; however, an understanding of distributed applications and technologies will be beneficial

Seminar Outline

1) Introduction to Business Event Processing (BEP)

a) Definition of BEP
b) Why do companies need to manage (near) real-time events?
   (1) The ever increasing torrent of business events
   (2) How companies benefit from a real-time view of their business
   (3) Aligning business and IT

2) First Things First: Defining a BEP Architecture

a) Architecture defined
b) Why do we need a BEP architecture?
c) Service Oriented Architecture (SOA) vs. Event Driven Architecture (EDA)
   (1) Principles of SOA
   (2) Principles of EDA
   (3) SOA vs. EDA: different, but complementary
   (4) Interface style
   (5) Interaction mode
   (6) Process flow
   (7) Classification of the degrees of coupling
d) The event data architecture
   (1) Canonical event formats
e) Conceptual BEP reference architecture

3) Laying the Foundation: Integrating Applications and Data

a) Application integration overview
   Event capture, transformation, routing, security, legacy encapsulation / mainframe integration, Business-to-Business (B2B) events
b) Using Web Service Definition Language (WSDL) to define events
c) Event propagation: SOAP, WS-Notification, WS-ReliableMessaging
d) Using an Enterprise Service Bus (ESB) for mediation
e) Integrating legacy and packaged applications

4) Turning Events into Business Value – Part 1

a) Combining automated processes and people oriented tasks
   (1) Business Process Management (BPM) defined
   An overview of process modeling
   What is a Business Process Management system (BPMS)?
   (2) Business Process Execution Language (BPEL)
   Working with BPEL tools
   Integration beyond services - Web Services Invocation Framework (WSIF)
   (3) Business Process Management Notation (BPMN)
   (4) Composing applications/services into processes vs. managing human workflow
   BPEL4People
b) Making the connection: the synergy of BPM and SOA
   (1) Moving from "PowerPoint" style process models to executing code

5) Turning Events into Business Value – Part 2

a) Closing the loop through Business Activity Monitoring (BAM)
   (1) BAM goals and benefits
   (2) Contrasting BAM and traditional Business Intelligence
   (3) Conceptual BAM architecture
   (4) Maturity levels and implementation strategies
b) Providing new insights: Complex Event Processing (CEP)
   (1) The business case for CEP
   (2) CEP requirements and solutions
   (3) Example CEP application
   (4) CEP patterns
   (5) The relationship between CEP and BAM, CEP and BPM

6) Project Examples, Industry Outlook, and Conclusions

a) Project examples
b) Industry outlook
c) Conclusions