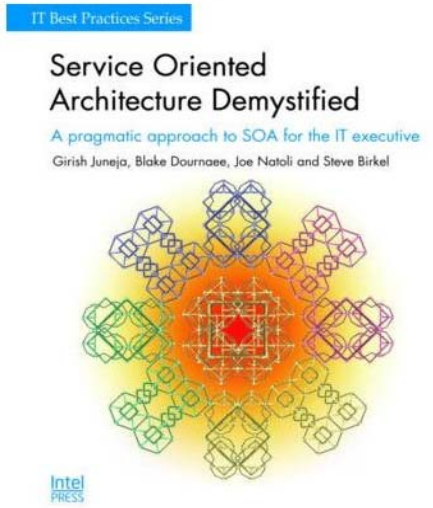

Simplify your Enterprise SOA without Compromise

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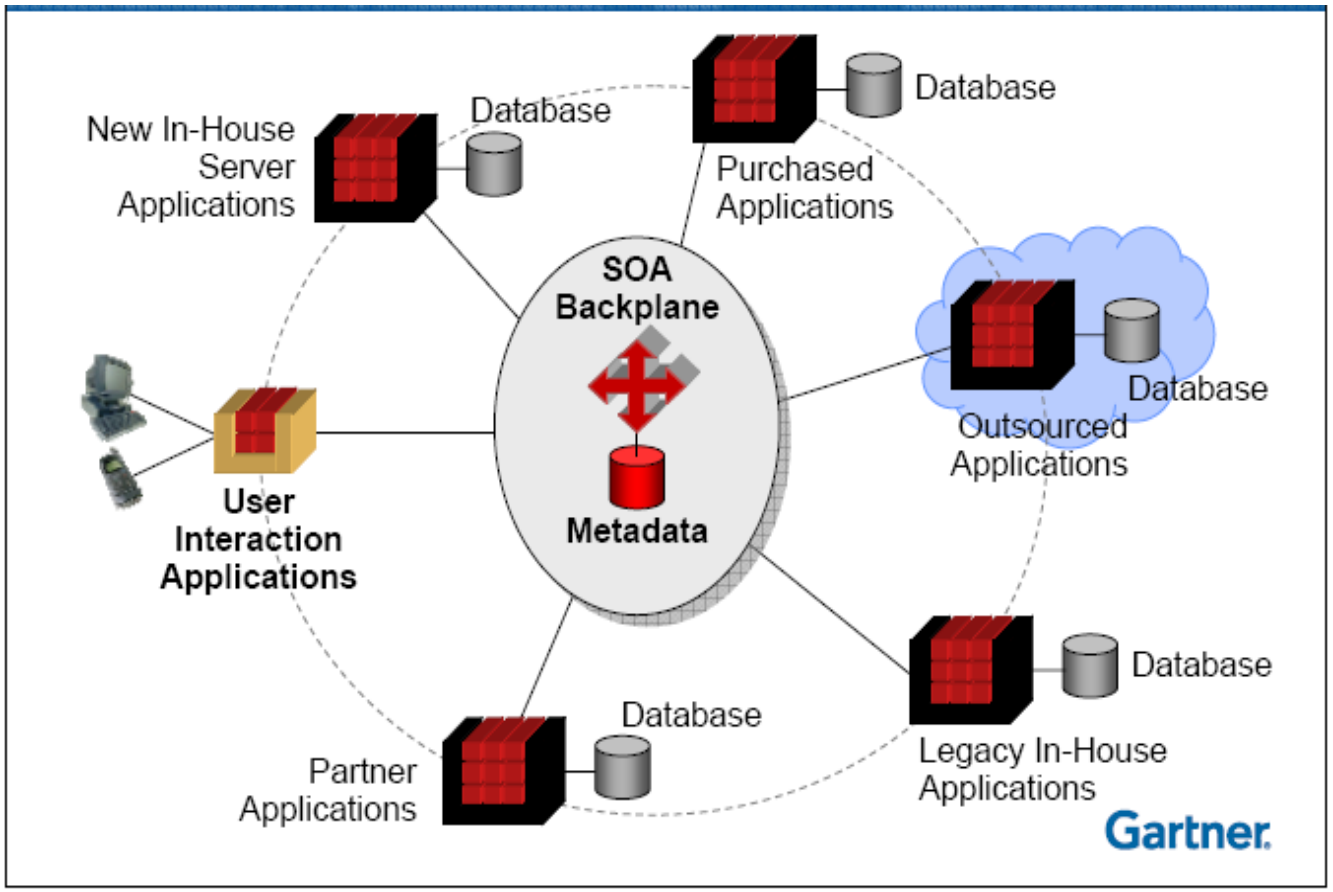
Today's Discussion

- Key Challenges in scaling SOA deployments
- Best Practices for Successful SOA Implementation
- Introduction to a SOA "Soft Appliance"
- Usages of a SOA "Soft Appliance"

Today's Emphasis is Architecture & Best Practices

Context of a Service Oriented Architecture



Source: Yefim Natis, Gartner
Patterns and Guidelines for Starting with SOA and Moving to Advanced SOA, 06/08

Vision of SOA:

- Reuse across platforms and technology generations
- Common delivery of functions and data
- Flexible separation of rules
- Location independent and re-configurable interactions
- Agile alignment of IT assets to business process change

Key Challenges in an SOA Deployment

- **Crowded and confused SOA market of** complex non-interoperable products
- **Increased development time** spent learning new products and often coding adaptors to in place systems
- **Poor Performance** for mission critical applications due to poor XML performance
- **Increased capital costs** from incremental server farms of application servers
- **Increased complexity and marginal ROI,** the ideal SOA architecture isn't always translating into increased business value

SOA: Realities & Best Practices

- **Realities of SOA:**
  - Reuse and Agility are the key objectives
  - Getting these benefits at scale is hard
  - Can't rip and replace legacy
  - Current versions of major vendor suites are SOA
  - One implementation of SOA at scale is not practical
- **Best Practices to move from SOA Vision to Reality**
  - **Get the Foundation Right**
    - Plan for Success … Set the Long-Range goals for data, organization and shared infrastructure
  - **Pilot, Iterate and Evolve**
    - Think big, but start small … Focus on Core rather than Context Processes
  - **Implement the Big Bus and the Little Bus (Federated SOA)**
    - Decouple Global and Local concerns … process and technology
  - **Keep an Eye on the Future**
    - Use standards and leverage ***SOA intermediaries*** to evolve your computing infrastructure

SOA Appliance – Definition & Benefits

- **Definition:** An embedded system device that provides a narrow range of functions, and generally uses a dedicated hardware platform*

- **Traditional Benefits:**
  - Purpose built, high performance
  - Easy to manage and configure
  - Perceived as “more secure”

From Wikipedia (http://en.wikipedia.org/wiki/Computer_appliance)

SOA Hardware Appliance Usage Progression

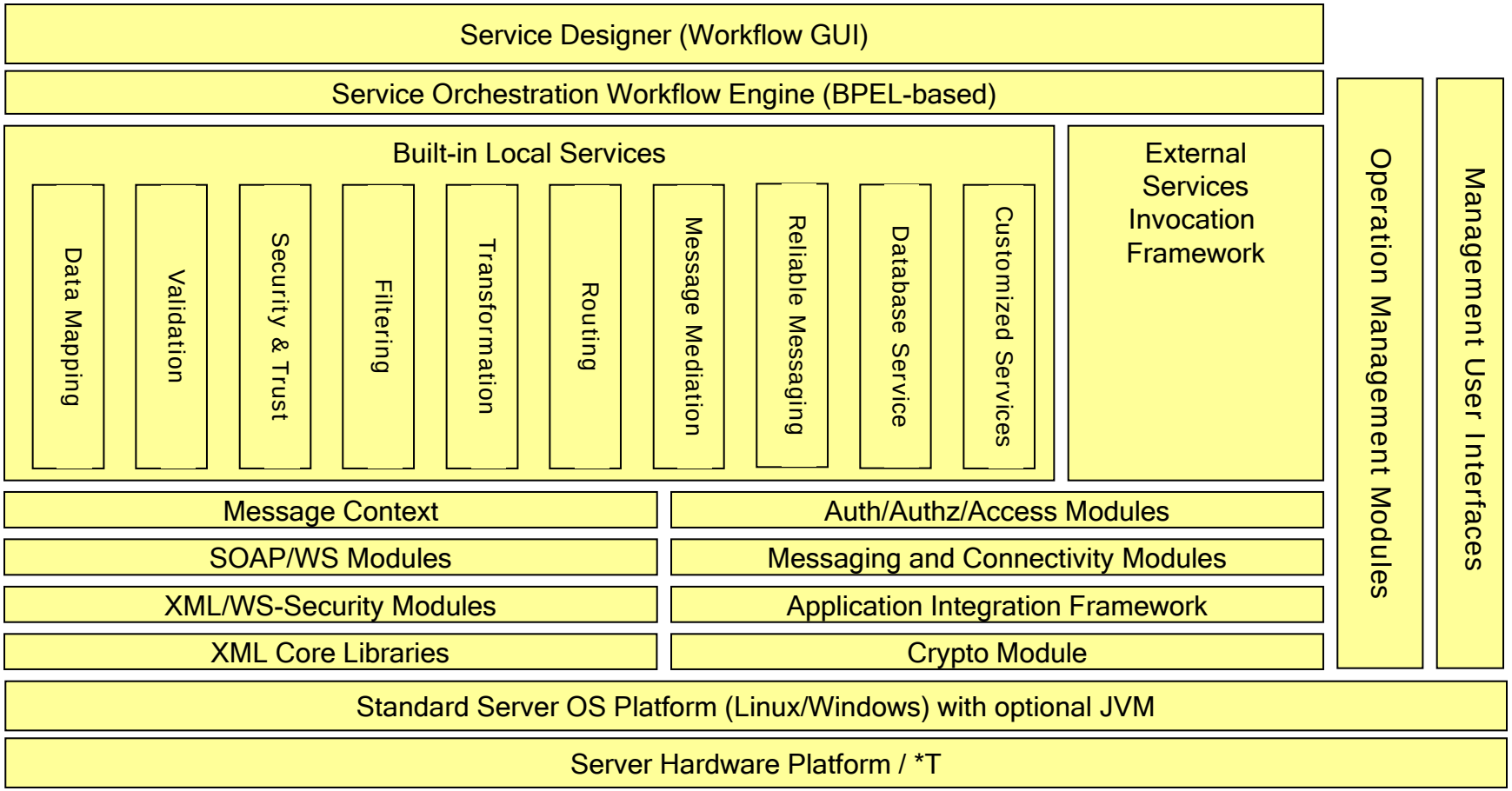
Date	Paradigm	Problem	Solution
2000	Static XML	"XML parsing and transformation is too slow to be useful for web sites; I need to process XML at wire speed."	Acceleration Appliance 
2002-06	XML Web Services	"I need to provide scalable XML security for my Web Services as well as central security policy enforcement."	Security Appliance 
2007+	SOA Enablement	"I need to service-enable legacy applications across disparate protocols and message formats"	Integration Appliance 

Drawbacks of SOA Hardware Appliances

SOA Appliances seem like a good fit, but fall short. Why?

- Initial Ease of Use comes at a Cost
  - Ease of use and management are not necessarily intrinsic to hardware – the same features can be implemented in software
- Limited Extensibility/Flexibility
  - New features in the form of custom steps often wait a full release cycle for inclusion
  - Addition of NIC cards (ports) is impossible without a new appliance model
  - Addition of expansion boards is impossible (such as Crypto accelerators)
  - The reality of uniform security policy requirements means that appliances may be required to include on-board IDS software or be rejected for use
  - Appliances can't be extended to meet new security features and standards over time and require a costly refresh
- Deployment Limits
  - Purpose built appliances are 6-12 months behind the latest CPU technology
  - Ownership problems in the datacenter can leave the appliance in a state of limbo ("We don't know where this fits!"). For example – is it owned by the networking group or application group or both?
- Incremental Costs
  - Distributed development teams require additional appliances just for development purposes – appliances can't be virtualized like software. Inefficient use of costly data center real estate.
  - Old appliances must be discarded or returned when upgraded, unlike general purposes servers which can be reused
  - Higher TPS/Watt usage over general purpose servers.

SOA “Soft” Appliance – Software Components

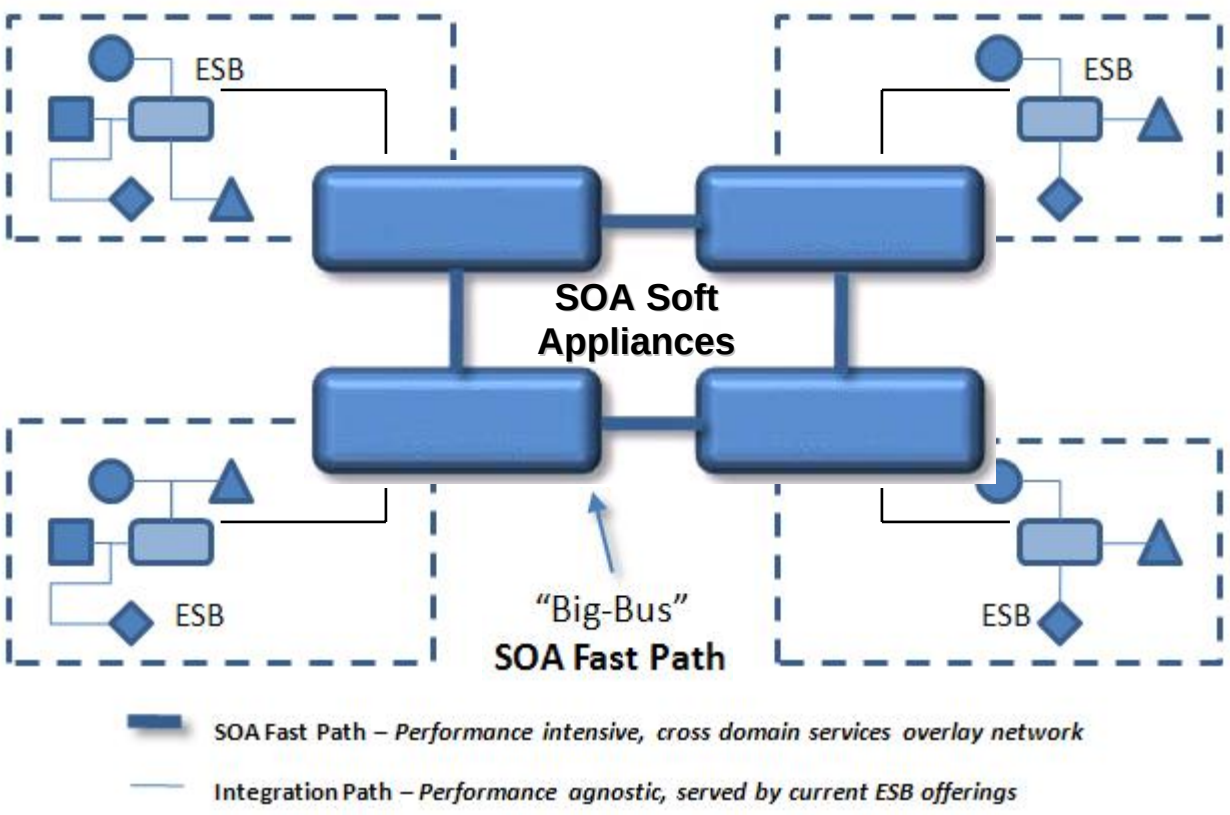


Simplified SOA without Compromise:

Simplicity and Performance of an Appliance + Flexibility of Software

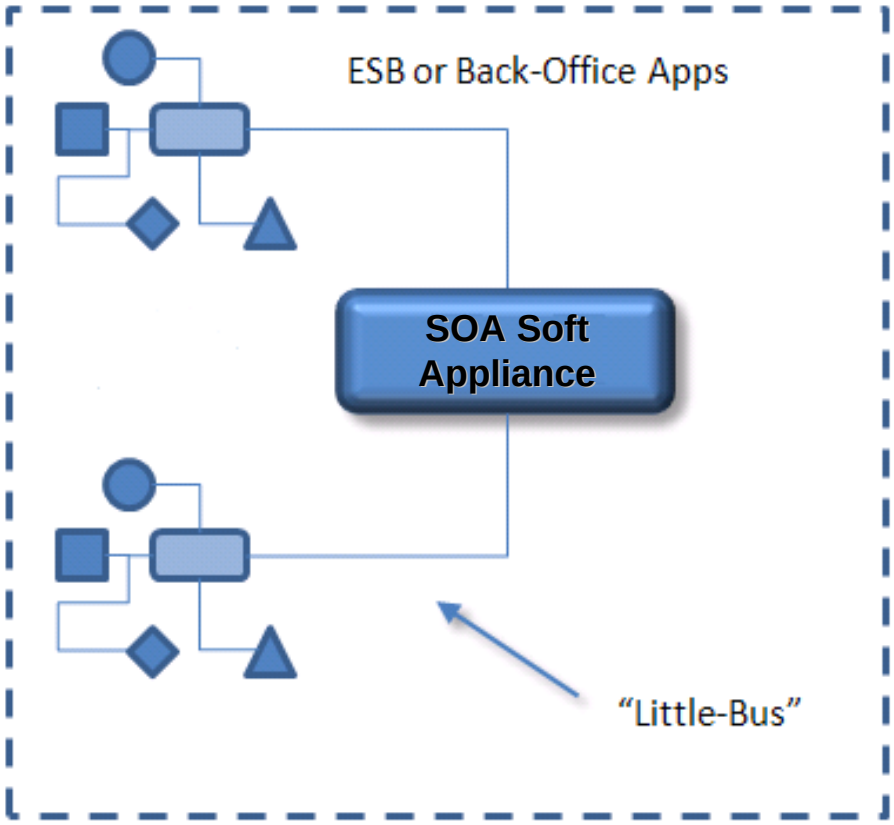
SOA “Soft” Appliance – Network Edge Deployment

- *Beginning with disparate “Little Bus” domains…i.e. a Federated SOA deployment*



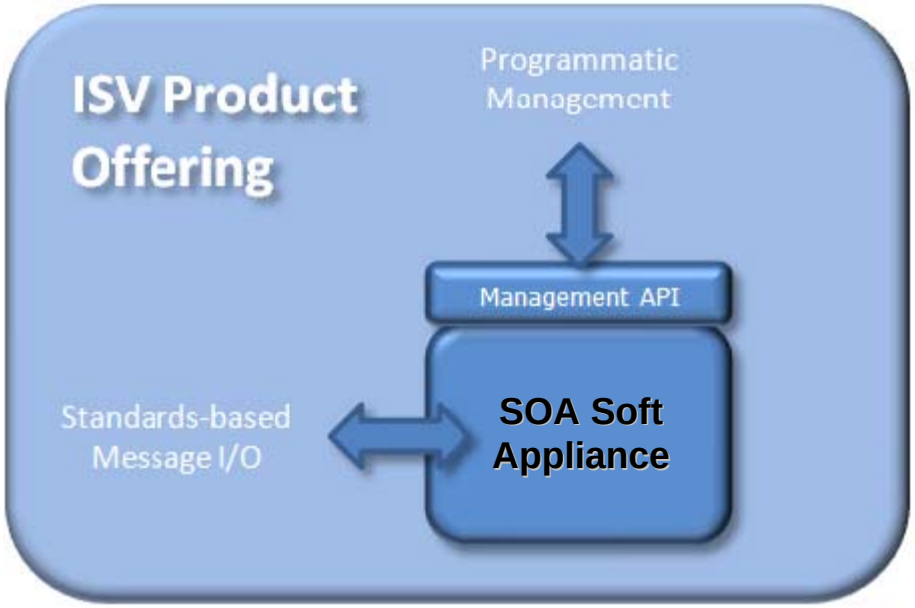
- **Deployment Characteristics**
  - SOA Gateway, security & workflow
  - Appliance reliability
  - Software flexibility
  - Cross domain, XML-rich application
  - Scalable, High Performance

SOA “Soft” Appliance – Internal Network Deployment



- **Deployment Characteristics**
  - SOA performance pain points
    - Service Enablement
    - Service Virtualization
    - High speed workflow execution
    - XML filtering, routing and validation
    - Non-XML data integration
    - Transformation or security offload

SOA “Soft” Appliance – Bundle / OEM Deployment



- **Deployment Characteristics**
  - Embeddable SOA Workflow Engine
    - Private Labeling, Re-skinable User Interface
    - Programmatic Management API
    - JBI and Axis2 Web Service Support
    - Standard message-based I/O

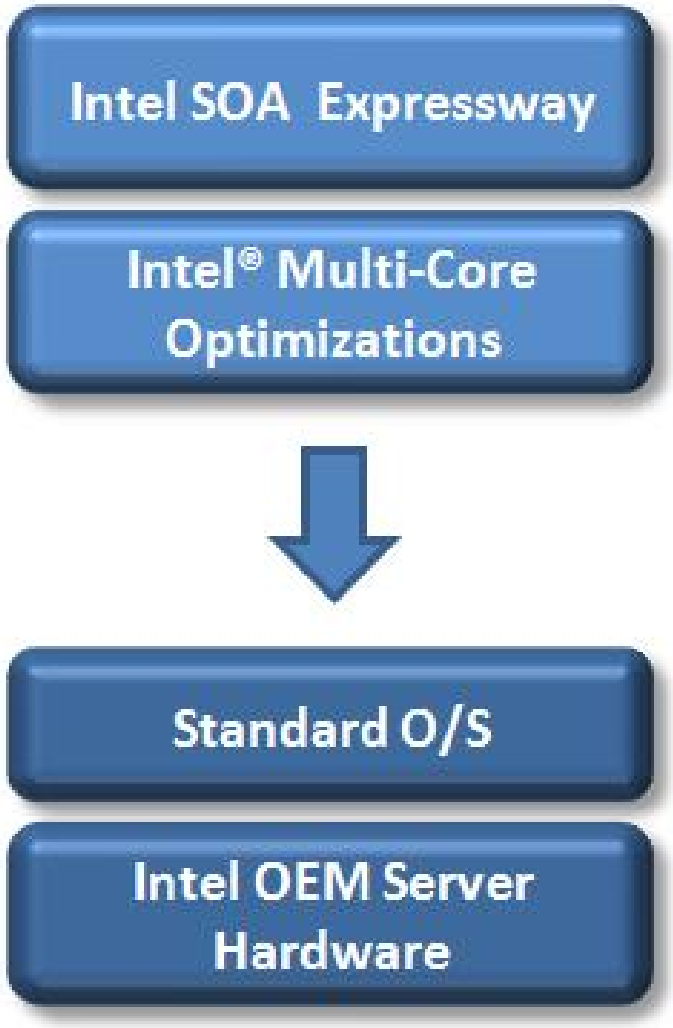
SOA “Soft” Appliance Usage Summary

- SOAP and XML Processing Accelerator
- Hardened Perimeter Security Gateway
- Enterprise Service Virtualization Platform
- Mainframe SOA Enabler
- Secure, High Speed B2B Gateway
- Near Real-time Service Pipeline to data marts
- Embedded Workflow and Service container for applications

Simplified SOA without Compromise:

Broad usage model support on a common, easy to deploy platform

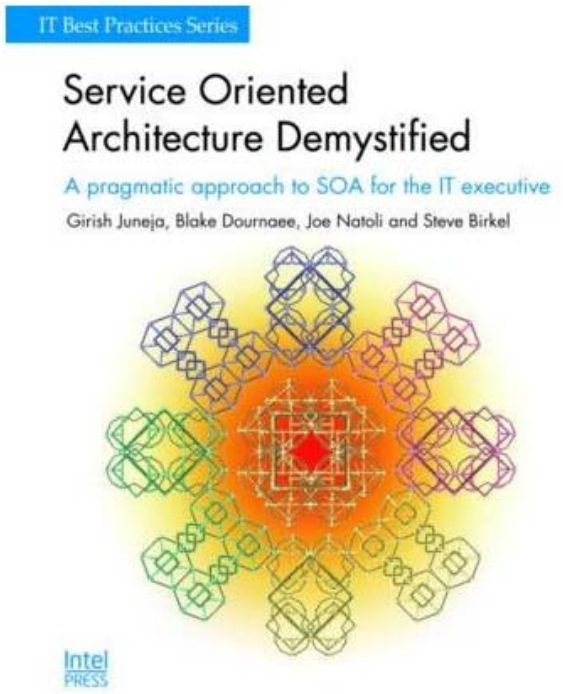
SOA Expressway – SOA "Soft" Appliance



- **Feature Overview**
  - **SOA Acceleration**
    - Workflow and XML/WS-* acceleration
    - Non-XML Data Format Conversion
    - Built on Proven Sarvega, Inc. Technology
  - **Codeless Orchestration Designer**
  - **Appliance Ease of Deployment**
    - Appliance manageability, Software flexibility
    - Alarms, alerts and logging
    - Cluster based, black-box management
    - Multi O/S Support: Redhat, Suse, Windows
    - VMM Support (Xen, VMWare, Microsoft)
  - **Software Extensibility**
    - Onboard Java Integration Framework
    - Custom protocol support
  - **Optimized for Intel Multi-Core**
    - Scales with off-the-shelf servers
    - Ties to future Xeon optimizations

www.intel.com/software/soae

Thank You



Questions ... ???