IBM

SOA solutions using WebSphere on IBM System p5 servers

Economic forces and accelerating change are driving the need for flexibility and re-use of business processes. Implementation of an SOA (Service-Oriented Architecture) solution can help companies become more flexible by aligning the IT infrastructure to business objectives. Service-Oriented Architecture (SOA)-based open architectures have the potential to deliver outstanding degrees of IT flexibility. Companies can select different entry points to exploit service orientation principles, such as Web Services, and the selection of an environment that can integrate easily across the enterprise can help unlock the full potential of SOA. SOA project implementations can deliver superior value when coupled with IBM System p5™ servers, leveraging key attributes, including virtualization, reliability, performance, and applications support.

Highlights

- *Enables automation of processes for business optimization*

- *Allows connecting of services across and beyond company boundaries*

- *Helps increase business flexibility, improve efficiency, lower costs and increase customer satisfaction*

- *Provides high level of reliability, performance and application support*

Most companies are using service oriented principles to meet specific application or customer requirements, such as requests to send invoices electronically. Web services and other open standards are helping these companies to take the next step and transform their whole IT infrastructure into a Service Oriented Architecture (SOA). A service is a repeatable business task, specifically part of a business process. Think about what your company does on a day-to-day basis and break those business processes up into repeatable business tasks or components. This is analogous to building blocks snapping together to build a structure. Services or Web services are the building blocks, and they are snapped together into a business process.

But in many companies, it is more like a puzzle—there are so many applications across the business or in partner and customer companies that it's hard to find the right service. Plugging them in is easy once you find the piece.

What is SOA then? It is quite simply an architectural approach that structures IT assets as a series of reusable, loosely-coupled services that perform business functions using a standard specification. SOA creates the flexibility that successful businesses require. IBM has defined the SOA Foundation, an integrated, open set of software and best practices that provide what is need to get started with SOA. The software that makes up the SOA Foundation has been carefully selected from the broader IBM software portfolio to support each stage of the SOA lifecycle. To build flexible business on SOA, the SOA Foundation requires a rock solid (i.e., high performance, stable, high availability, with excellent security and reliability features) IT Infrastructure like System p. The SOA Foundation is designed to help extend the value of the applications and business processes that are already running the business today. Once deployed on System p5 servers, the software components of the SOA Foundation benefit from the IBM Power Architecture™ with superior performance, proven scalability and security features, on a platform that is flexible to support growing business demands.

Integrated application infrastructure
Success with SOA starts with a flexible, robust infrastructure, such as the System p™ platform, that can be used in conjunction with an existing IT infrastructure to create additional business value. You will need to evolve the infrastructure to integrate business processes, data, applications and people to grow the business while meeting the changing demands of the marketplace. This on demand business environment, now enabled through SOA, requires extended business value networks including partners, suppliers and customers linked by collaborative processing. It requires advanced capabilities like virtualization and use of open standards—core elements of the IBM System p5 Express, System p5 and System Storage™ offerings. IBM is best positioned to deliver SOA solutions because IBM understands SOA and the systems requirements and has helped hundreds of businesses implement SOA.

IBM has extensive industry experience in SOA with over a thousand SOA clients all over the world in a wide variety of industries. IBM also has a thriving ecosystem of partners for SOA, plus

the required industry specific knowledge and best practices to implement SOA in your business. And by deploying SOA on top of a System p platform, you can enable innovation across your company and business value chain, simplifying the complexity of the IT environment and helping reduce uncertainty around systems security and availability. All this while improving the economics of IT.

The importance of the right server platform

An effective implementation of SOA requires a server platform that is rock solid, flexible, manageable, powerful and cost-effective with excellent security features. IBM's System p family of servers can provide the right foundation to meet these requirements:

- *Flexible: Advanced virtualization features that adjust to your business needs. Choose from the IBM AIX 5L™ (the industrial-strength UNIX® operating system from IBM) or Linux® operating systems. Servers ranging from 1U single processor models for distributed workloads to 64-core systems for Server Consolidation.*
- *Manageable: Optional IBM Advanced POWER™ Virtualization Manager and the new browser-based Integrated Virtualization Manager (IVM) for ease of use.*

- *Secure: Mainframe-inspired reliability, availability, and security capabilities designed to keep applications up and running.*
- *Powerful: A range of models for applications from Web services to databases to Business Intelligence (BI) to High Performance Computing (HPC). These servers lead in many industry-standard benchmarks.*
- *Cost-effective: IBM System p5 servers offer excellent price and performance characteristics.*

IBM System p servers

With one-core to 64-core servers based on IBM POWER processor-based technology, IBM offers a wide range of System p5 servers from the System p5 185 to the System p5 595, giving you multiple computing options for hosting IBM WebSphere® software to meet varying budgets without sacrificing performance. Systems based on IBM POWER5™ and POWER5+™ processors provide proven technology used for applications ranging from small departmental workloads to the largest supercomputers in the world. These servers are tuned to combine the flexibility and cost-effectiveness of the AIX 5L and Linux OSs with the scalability and robustness of the IBM POWER

platform. And these systems optionally offer IBM Virtualization capabilities like Advanced POWER Virtualization (standard on p5-590 and p5-595), which can help optimize CPU, networking and storage IT resources, ideal for implementing SOA-based solutions.

Putting it all together: WebSphere software and IBM servers

Business flexibility requires flexible IT. Flexibility is enabled through WebSphere software, the foundation for SOA, and IBM System p5 servers. By designing your business systems around the Service-Oriented Architecture and using System p5 servers, your IT environment can be flexible, manageable and powerful, provide excellent security features and enable cost-effective computing. Your business can become a true on demand business, enjoying the flexibility that is delivered by the combination of the IBM SOA solution and IBM's SOA expertise. As your systems make use of powerful virtualization capability, you can adjust to changing business conditions. By using open standards, you can maximize options for growing and extending the business and for collaboration within your company and with business partners and customers.

For more information

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