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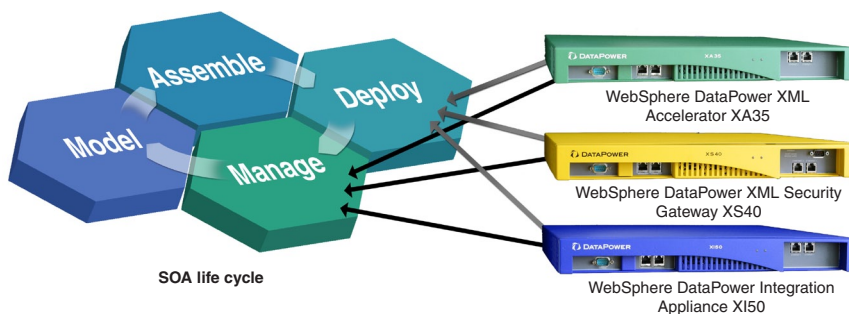
IBM WebSphere DataPower SOA appliances

Highlights

- **Simplify SOA infrastructure and deployment through specialized SOA appliances**

- **Help secure SOA XML-based implementations**

- **Accelerate SOA implementations and performance with faster XML processing**

Organizations have to respond quickly to tactical change, and are adopting new operating models to achieve this agility. As a result, enterprises are recognizing the benefits of deploying reusable, open-standards-based software components in a service oriented architecture (SOA) approach. Taking this approach can result in a range of benefits, from improvements to financial transactions and online shopping to cost-saving inventory optimization across suppliers to synchronized multichannel product introductions. Likewise, embracing open standards, such as XML-based Web services, has helped many companies improve productivity, quickly respond to changing business needs and seize opportunities as they arise.

To take advantage of the improved business processes, flexibility and IT efficiency that comes with moving to SOA, organizations require pervasive, scalable services and controls, robust security, and high service assurances in their infrastructures. Today, organizations often find themselves struggling to deliver these critical SOA requirements without having to handle prohibitive cost, complexity and hard-to-manage infrastructures. Addressing these challenges requires a pragmatic approach to SOA — one that simultaneously recognizes the evolution of standards, the value of existing infrastructure investments, your organizational challenges and how performance can be affected across applications.

WebSphere DataPower XML Accelerator XA35

WebSphere DataPower XML Security Gateway XS40

WebSphere DataPower Integration Appliance XI50

SOA life cycle

WebSphere DataPower SOA appliances can help with the deploy and manage phases of the SOA life cycle.

ON DEMAND BUSINESS™

An innovative approach to SOA Web services processing

IBM WebSphere® DataPower® SOA appliances offer a unique way to simplify deployments, improve performance and enhance the security of SOA implementations. With a broad product family to meet varying enterprise needs, WebSphere DataPower SOA appliances can complement specific IBM or other products to support each stage of the SOA life cycle. You can take advantage of the products' critical transformation, acceleration, security and routing functions to help ease the deployment of your SOA implementations.

WebSphere DataPower technology can meet the demand for fast, reliable XML processing by providing simple and consumable appliances that transform back-end disparate message formats to XML while applying message-level security and service policies. You can streamline your SOA deployment in a security-rich environment with a WebSphere DataPower SOA appliance that requires minimal configuration, customization and management. You can also accelerate application integration by using a WebSphere DataPower SOA appliance to minimize the time necessary to implement an infrastructure that can optimally support the IBM SOA Foundation implementation. And they help protect SOA traffic by implementing XML threat protection and Web services security functions, as well as integrating with security and identity management software, such as IBM Tivoli® software.

Addressing your business needs with three WebSphere DataPower appliances

WebSphere DataPower SOA appliances are in a 1U (1.75in.) rack-mountable form factor to fit into industry-standard racks. Attachment to the network is through Ethernet. DataPower hardware and software cannot be taken apart and deployed within other servers. The following three SOA appliances offer expanded capabilities:

- *For accelerated SOA processing, the* **IBM WebSphere DataPower XML Accelerator XA35** *appliance can speed common types of XML processing by offloading it from servers and networks. It can perform XML parsing, XML schema validation, XML Path Language (XPath) routing, Extensible Stylesheet Language Transformations (XSLT), XML compression and other essential XML processing with wirespeed XML performance.*

- *For added security capabilities, the* **IBM WebSphere DataPower XML Security Gateway XS40** *appliance provides an XML threat-reduction and security-enforcement layer for XML messages and Web services transactions, including encryption, filtering, digital signatures, schema validation, WS-Security, XML access control, XPath and detailed logging. The appliance includes easy-to-use XML Firewall, service-level management and access-control enforcement.*

- *For additional accelerated security-rich integration capabilities,* **IBM WebSphere DataPower Integration Appliance XI50** *provides transport mediation, routing and transformations among binary, text and XML message formats. Visual tools can be used to describe data formats, create mappings between different formats and define message flows. This appliance offers an innovative solution for security-rich XML enablement, enterprise message buses and mainframe connectivity.*

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SOA appliances simplify SOA deployment

By integrating many core functions required for adopting SOA or Web services into a single purpose-built device, appliances simplify the overall SOA infrastructure. WebSphere DataPower SOA appliances are designed to easily deploy into an existing environment as an inline device in XML proxy mode or alongside systems in coprocessor mode. You can gain business value from using these appliances without having to change your network or application software — and you can take advantage of IBM autonomic computing self-management capabilities. As a result, proprietary schemas, coding or application programming interfaces (APIs) are not required to install or manage the device.

Integration across middleware to enhance SOA deployment

WebSphere DataPower SOA appliances support IBM Rational® and other popular XML integrated development environments, which helps reduce the time you have to spend in development and debugging. You can also use WebSphere DataPower SOA appliances with IBM WebSphere Application Server, IBM WebSphere Process Server, IBM WebSphere Portal, IBM WebSphere MQ, IBM WebSphere Enterprise Service Bus (ESB) and IBM WebSphere Message Broker to help process XML transactions in a faster, more secure and simpler way.

Integration with Tivoli security, identity and service management software

The integration of WebSphere DataPower SOA appliances with IBM Tivoli Federated Identity Manager and IBM Tivoli Access Manager helps provide more-secure SOA deployments. Tivoli security-management solutions also enable you to centrally manage user accounts and credentials, set security policies and audit XML traffic that is protected by DataPower SOA appliances. Integration with IBM Tivoli Composite Application Manager for SOA enables centralized mediation control, service-level management and dashboard monitoring. The combination of Tivoli software and the robust WebSphere DataPower XML gateway provides the comprehensive capabilities for SOA security and Web services management that your enterprise requires.

Helping you create more-secure SOA implementations

As your organization moves to On Demand Business by implementing an SOA, the largest barriers continue to be scalable integration and application security. As a core part of IBM SOA Foundation, WebSphere DataPower SOA appliances offer easy configuration and operation to help reduce operational complexity. With WebSphere DataPower SOA appliances, IBM can help you simplify, accelerate and secure your SOA deployments to increase your flexibility — and help enable you to achieve your On Demand Business goals.

For more information

To learn more about IBM WebSphere DataPower SOA appliances, contact your IBM representative or IBM Business Partner, or visit:

ibm.com/websphere/datapower

To join the Global WebSphere Community, visit:

www.websphere.org

IBM WebSphere DataPower SOA appliances at a glance

Specifications	WebSphere DataPower XML Accelerator XA35	WebSphere DataPower XML Security Gateway XS40	WebSphere DataPower Integration Appliance XI50
XML			
XPath	✓	✓	✓
XSLT	✓	✓	✓
Schema, document type definitions (DTDs)	✓	✓	✓
Optimization			
Compression	✓	✓	✓
Multistep flow processing and mediation	✓	✓	✓
Wirespeed XML and XPath processing; XSLT	✓	✓	✓
Enterprise messaging and integration			
Transport (HTTP, HTTP Secure [HTTPS])	✓	✓	✓
WebSphere MQ, Java™ Message Service (JMS) and so on			✓
Protocol transformation (for example, from WebSphere MQ to HTTP)			✓
Routing (XPath, WS-Routing and XML)	✓	✓	✓
Non-XML message transformation (such as binary, flat text, COBOL Copybook, ISO 8583, electronic data interchange [EDI])			✓
Message logging	✓	✓	✓
Data security			
Data validation (XML Schema, DTD and SOAP filtering)	✓	✓	✓
XML encryption and digital signature		✓	✓
WS-Security		✓	✓
WS-SecureConversation		✓	✓
Field and message-level XML security		✓	✓
Security policy enforcement for XML Web services			
Authentication of Web services messages using WS-Security and Security Assertion Markup Language (SAML), Version 1.0, 1.1 and 2.0		✓	✓
Authorization for XML messages		✓	✓
Support for Kerberos, RADIUS, Lightweight Directory Access Protocol (LDAP) and SAML queries		✓	✓
Ability to process Liberty Alliance ID-FF, WS-Trust and WS-Federation messages when configured with Tivoli Federated Identity Manager or similar policy manager		✓	✓
Federation of security tokens when configured with Tivoli Federated Identity Manager or similar policy manager		✓	✓
Federal Information Processing Standard (FIPS) Hardware Security Module (HSM) option		✓	✓

IBM WebSphere DataPower SOA appliances at a glance (continued)

Specifications	WebSphere DataPower XML Accelerator XA35	WebSphere DataPower XML Security Gateway XS40	WebSphere DataPower Integration Appliance XI50
Web services			
SOAP, Universal Description, Discovery, and Integration (UDDI), Web Services Description Language (WSDL) and Web Services Distributed Management (WSDM)		✓	✓
WS-Trust and WS-SecurityPolicy		✓	✓
System and service security			
Service virtualization	✓	✓	✓
XML and SOAP firewall		✓	✓
XDoS protection		✓	✓
Management			
Web GUI	✓	✓	✓
Command-line interface (CLI)	✓	✓	✓
Simple Network Management Protocol (SNMP)	✓	✓	✓
SOAP management interface	✓	✓	✓
Integrated development environment (IDE) integration through Eclipse and Altova XML Spy	✓	✓	✓
Service-level management (to configure, enforce and monitor qualities of service)	✓	✓	✓
Logging, drill down and alerting (on-box, off-box or centralized)	✓	✓	✓
Device virtualization and role-based management	✓	✓	✓
Transport Layer Security (TLS)			
Secure Sockets Layer (SSL) and HTTPS, hardware-accelerated	✓	✓	✓
Public key infrastructure (PKI)			
XKMS, RSA, 3DES, DES, AES, SHA, X.509, PKCS, CRLs, OCSP		✓	✓
XML digital signature, time stamp and nonrepudiation		✓	✓
Reliability			
Virtual Router Redundancy Protocol (VRRP), single firmware image, no moving media	✓	✓	✓

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