

## Application Architecture For Websphere A Practical Approach To Building Websphere Applications Joey Bernal

This IBM® Redbooks® publication discusses the value proposition of cross-channel solutions and describes the IBM Retail Integration Framework Commerce Product Strategy solution and service-oriented architecture (SOA) as an enabler. In depth, this book describes cross-channel processes and cross-channel features and proposes scenarios and configurations to meet the challenges in a competitive environment. This book describes the latest features and techniques of IBM WebSphere® Commerce Version 7. In it, we present an overview of the WebSphere Commerce order and inventory management systems, the distributed order management (referred to as DOM throughout this book) integration framework, and a sample DOM integration scenario. We discuss the Madisons starter store (Web 2.0 storefront) and present a hands-on experience that integrates MapQuest with the WebSphere Commerce V7 Store Locator feature. We discuss how a merchant can use the mobile features that are included in WebSphere Commerce V7 to define e-Marketing Spots and promotion for mobile users. In addition, we demonstrate how to use Google Maps with the Store Locator feature on a mobile device. We include in this book an example about how to apply WebSphere Commerce features on a cross-channel solution as applied at the Easy Hogary Construcccion home improvement retail company in South America. The scenario explains how to scale from an SOA store to a cross-channel business model. This book is designed for use by WebSphere Commerce developers, practitioners, and solution architects in various industries. Contains everything that a project team needs to know about the development and deployment of Web services with the IBM WebSphere product family. Includes examples for all development artifacts in a format that can be reused in the reader's project. The text combines the authors' own practical experiences with consolidated information on the latest product capabilities in a unique approach that allows the book to be easily accessible to a broad spectrum of readers. Finding a balance between a euphoric/optimistic and down-to earth/realistic view on the subject, this book should sit on every Web service developer's bookshelf.

The author provides a practical, step-by-step approach in teaching how to use the IBM J2EE server side development tool called WebSphere Studio Application Developer (WSAD) for developing J2EE distributed applications.

& • Everything Java developers need to start building J2EE applications using WebSphere Tools for the WebSphere Application Server & & • Hands-on techniques and case studies: servlets, JSP, EJB, IBM VisualAge for Java, and more & & • Written by IBM insiders for IBM Press

IBM® Rational® Application Developer for WebSphere® Software V8 is the full-function Eclipse 3.6 technology-based development platform for developing Java™ Platform, Standard Edition Version 6 (Java SE 6) and Java Platform, Enterprise Edition Version 6 (Java EE 6) applications. Beyond this function, Rational Application Developer provides development tools for technologies, such as OSGi, Service Component Architecture (SCA), Web 2.0, and XML. It has a focus on applications to be deployed to IBM WebSphere Application Server and IBM WebSphere Portal. Rational Application Developer provides integrated development tools for all development roles, including web developers, Java developers, business analysts, architects, and enterprise programmers. This IBM Redbooks® publication is a programming guide that highlights the features and tooling included with Rational Application Developer V8.0.1. Many of the chapters provide working examples that demonstrate how to use the tooling to develop applications and achieve the benefits of visual and rapid application development. This publication is an update of Rational Application Developer V7.5 Programming Guide, SG24-7672.

As an administrator you need a secure, scalable, resilient application infrastructure to support the developers building and managing J2EE applications and Service Oriented Architecture services. WebSphere application server, a product from IBM, is optimized to ease administration and improve runtime performance. It helps you run applications and services in a reliable, secure, and high-performance environment to ensure business opportunities are not lost due to application downtime.

Pro (IBM) WebSphere Application Server 7 Internals covers the internal architecture and implementation of the WebSphere Application Server (WAS) version 7 product set and how other IBM products extend it. It presents information to enable administrators, developers, and architects to learn about the aspects of WAS that apply to them: Administrators will come to understand how the WAS7 environment functions to best optimize it for their environment, and what to do when things go wrong. Developers will learn to extend the functionality in the base WAS product. Architects will see how the WAS product underpins the IBM offerings to fit in an enterprise.

Maximize on the power of WebSphere Portal to build and deploy portals If you use, develop, manage, or administer WebSphere applications, you are probably already building or managing Web portals-or well on your way to doing so. With this comprehensive book, you'll discover how these portals bring together important functions such as integration, presentation, organization, and customizations-functions needed in every complex application environment. The unparalleled author team of experts offers you in-depth insight on mastering the complex aspects of WebSphere Portal, walking you through every facet from installing to deployment. Mastering IBM WebSphere Portal focuses on not only the portal as a server, but also how it interacts with components such as LDAP servers, enterprise applications, mobile devices, and even other portals. The authors begin with an introduction to the WebSphere product family and then explore such topics as: \* Installing and customizing the portal, as well as migrating existing environments to version 5 \* Defining portlets, pages, and user interface properties \* Applying personalization, collaboration, search, and document and content management within WebSphere Portal v. 5 \* Using high availability, security and single sign-on, identity management, Web services, and enterprise applications \* Setting up a portal in a high-availability environment and integrating external applications into WebSphere Portal The companion Web site, [www.wiley.com/compbooks/ben-natan](http://www.wiley.com/compbooks/ben-natan), presents all the code in the book as well as links to vendors and sources of information pertaining to WebSphere Portal.

IBM WebSphere® eXtreme Scale provides a solution to scalability issues through caching and grid technology. It provides an enhanced quality of service in high performance computing environments. This IBM® Redbooks® publication introduces WebSphere eXtreme Scale and shows how to set up and use an eXtreme Scale environment. It begins with a discussion of the issues that would lead you to an eXtreme Scale solution. It then describes the architecture of eXtreme Scale to help you understand how the product works. It provides information about potential grid topologies, the APIs used by applications to access the grid, and application scenarios that show how to effectively use the grid. This book is intended for architects who want to implement WebSphere eXtreme Scale. The original edition of this book was based on WebSphere eXtreme Scale version 6.1. It was published in 2008 and described as a "User's Guide". This second edition updates the

information based on WebSphere eXtreme Scale version 8.6, and covers key concepts and usage scenarios.

Make the most of completely revamped administration tools in WebSphere Version 5 IBM WebSphere Version 5 offers a completely rewritten, radically improved infrastructure for administering servers and applications. Now, its creators have written the definitive WebSphere Version 5 administration reference and tutorial: everything you need to manage WebSphere to the highest levels of performance and efficiency. The authors systematically cover all four WebSphere administration toolsets: command-line utilities, the new Administrative Console, scripting tools, and Java management APIs. You'll find a complete library of code examples, plus powerful new insider's tips for maximizing your productivity as a WebSphere administrator. Whether you're managing WebSphere Version 5 or incorporating administrative support into new WebSphere applications, this book provides you with the techniques, examples, and tips you need to do it right.

Fundamentals of WebSphere administration: servers, nodes, node agents, cells, clusters, and the deployment manager Revamped package structure of WebSphere Version 5 and its implications Process internals, distributed administration features, administrative security, and XML configuration file structure Command-line tools: a complete reference with practical examples Web-based graphical management with the new Administrative Console Scripting the management features of WebSphere Version 5 with wsadmin Writing custom management programs Extending the native WebSphere administrative system with new managed options Using Java administrative APIs to manage WebSphere applications from other products Sum Includes extensive code examples, real-world scenarios, and best practices Application Architecture For Websphere: A Practical Approach To Building Websphere Applications Pearson Education India Service Component Architecture (SCA) defines a service-based model for building business process applications using an SOA approach. This ability to drive a business process using individual, reusable services is the heart of the SOA concept. With IBM® WebSphere® Application Server Feature Pack for Service Component Architecture, you can deploy SCA applications to WebSphere Application Server. This IBM Redpaper™ publication provides a starting point for using the Feature Pack for SCA. It provides an architectural view of SCA and of the Feature Pack. In addition, this paper explains how to create simple SCA components from existing Java™ and Spring implementations. It discusses how to apply quality of service to applications, and how to deploy and manage SCA artifacts in WebSphere Application Server. The examples in this paper use Rational® Application Developer to illustrate how to create and package SCA applications.

IBM® WebSphere eXtreme Scale provides a powerful, elastic, high-performance solution for scalability issues through caching and grid technology. This IBM Redbooks® publication shows architects and IT personnel how to leverage the power of WebSphere eXtreme Scale technology to enhance data caching performance in their enterprise networks. This book discusses the scalability challenges and solutions facing today's dynamic business and IT environments. Topics discussed include existing scalability solutions, how WebSphere eXtreme Scale can be integrated into these solutions, and best practices for using WebSphere eXtreme Scale in different environments, including application data caching and database caching. Also included is an in-depth discussion of the WebSphere eXtreme Scale infrastructure, such as grid clients and servers, the grid catalog service, zone support, and scalability sizing considerations. This book focuses on the challenges and benefits of integrating WebSphere eXtreme Scale with other middleware products, including WebSphere® Business Events, WebSphere Commerce, WebSphere Portal, and Rational® Jazz™-based products. Detailed procedures for integrating, configuring, and monitoring WebSphere eXtreme Scale in WebSphere Portal and WebSphere Commerce environments are provided.

This IBM® Red paper books® publication is divided into three parts: Part 1, "Introduction" on page 1, provides an introduction to message-oriented middleware and the WebSphere® MQ product. We discuss the concept of messaging, explaining what is new in WebSphere MQ V7.0 and how it is implemented. An overview is provided on how it fits within the service-oriented architecture (SOA) framework. Part 2, "WebSphere MQ V7.0 enhancements and changes" on page 41, explains the new WebSphere MQ V7.0 features and enhancements in detail and includes compatibility and the migration considerations from the previous supported versions. Part 3, "Scenario" on page 253, contains a scenario that demonstrates how the new features and enhancements work and how to use them. The sample programs and scripts used for this scenario are available for download by following the instructions in Appendix B, "Additional material" on page 379.

This IBM® Redbooks® publication can help you install, tailor, and configure WebSphere® Application Server for Developers V7 on the Microsoft® Windows® platform. WebSphere Application Server for Developers is a no-charge version of WebSphere Application Server for use in a development environment only. It allows application developers to develop and unit test against the same run time as the production version of WebSphere Application Server. This book tells you how to perform these tasks: Download and install WebSphere Application Server for Developers V7. Use the command-line tools, web-based administrative console, and scripting tools. Deploy a web application with Java™ Database Connectivity (JDBC) to the application server with the first version of a sample application. Configure the sample application with Enterprise JavaBeans 3 (EJB3) and Java Persistence API (JPA). Add Java Message Service (JMS) and message-driven beans (MDBs) to the sample application and configure the built-in system integration bus (SIBus) messaging infrastructure. Add Representational State Transfer (RESTful) web service to the sample application. Incorporate WebSphere-specific application bindings files with the application. Enable debugging and produce and analyze JVM outputs. Learn how to use Eclipse to view and debug the sample applications.

Build a comprehensive web portal for your company with the coverage of full development life cycle with this book and ebook.

This IBM® Redbooks® publication helps you plan and execute the migration of J2EE applications developed for Oracle WebLogic Server, JBoss, GlassFish, and Apache Tomcat, so that they run on WebSphere® Application Server V7. This book provides detailed information to plan migrations, suggested approaches for developing portable applications, and migration working examples for each of the platforms from which we migrated. It is not our intention to provide a feature-by-feature comparison of these application servers versus WebSphere Application Server V7, or to argue the relative merits of the products, but to produce practical technical advice for developers who have to migrate applications from these vendors to WebSphere Application Server V7. The book is intended as a migration guide for IT specialists who are working on migrating applications written for other application servers to WebSphere Application Server V7.

This is the eBook version of the printed book. If the print book includes a CD-ROM, this content is not included within the eBook version. The IBM official guide for making framework and design decisions for their WebSphere applications Provides simple, recommendations for designing and adhering to a layered architecture approach for WebSphere applications Includes hands-on architects with decisions guidance and examples which can be used in defining their own architecture WebSphere is the #1 application server on the market and WebSphere Portal is the #1 portal application server on t.

Enterprise Java Programming with IBM WebSphere, Second Edition by Kyle Brown, Gary Craig, Greg Hester, Russell Stinehour, W. David Pitt, Mark Weitzel, Jim Amsden, Peter M. Jakab, Daniel Berg Foreword by Martin Fowler Enterprise Java Programming with IBM WebSphere, Second Edition is the definitive guide to building mission-critical enterprise systems with J2EE, WebSphere, and WebSphere Studio Application Developer. Fully updated for Versions 5.x of

WebSphere Application Server and WebSphere Studio Application Developer, it combines expert architectural best practices with a case study that walks you through constructing an entire system. The authors are an extraordinary team of WebSphere insiders: developers, consultants, instructors, and IBM WebSphere development team members. Together, they offer unprecedented insight into the use and behavior of WebSphere's APIs in real-world environments and systematic guidance for delivering systems of exceptional performance, robustness, and business value. Coverage includes - Practical introductions to J2EE, WebSphere Application Server 5.0, and Web application architecture Detailed coverage of Web application construction, including MVC partitioning with Struts, servlets/JSP, and session management Step-by-step guidance for building and testing application business models, including JUnit testing In-depth insight into EJB architecture, including transactions, security, and advanced object relational mapping Web services: examples and best practices leveraging WebSphere Application Server 5.x's latest enhancements CD-ROMs Included The CD-ROMs contain trial copies of IBM WebSphere Studio Application Developer (Version 5.0.2), IBM WebSphere Application Server (Version 5.02), and DB2 Universal Database, Personal Edition (Version 8.1.2) for Microsoft Windows 2000/XP. The CD-ROMs also include source code for the case study examples used in the book.

This comprehensive reference shows Java developers how to combine the power of J2EE with WebSphere to build business applications. Covers versions 3.5 through 5.0 of WebSphere and all aspects of J2EE development, from servlets and JSPs to more complex development with EJBs.

This IBM® Redbooks® publication describes how to build a production topology for business process management (BPM) solutions. The target audience is IT architects and IT specialists who want to implement a production topology in secured production environments and who have a high-level understanding of WebSphere® BPM products. This book emphasizes the steps for a successful installation without root access and without a graphic user interface (GUI). This book addresses the following products and provides instructions for creating a production-level Remote Messaging and Remote Support environment using a deployment environment pattern: WebSphere Process Server V7.0.0.2 WebSphere Business Monitor V7.0.0.2 WebSphere Business Services Fabric V7.0.0.2

\* Describes the IBM WebSphere versions 4.0 and 5.0 architecture from a nuts and bolts level, giving visibility to the technology and underlying WebSphere platform design \* Describes how to proactively manage the performance of an IBM WebSphere v4 or v5 platform \* Thorough descriptions of tuning WebSphere with performance and robustness in mind \* Teaches the reader how to develop custom IBM WebSphere performance monitoring and management tools IBM DB2® for z/OS® is a high-performance database management system (DBMS) with a strong reputation in traditional high-volume transaction workloads that are based on relational technology. IBM WebSphere® Application Server is web application server software that runs on most platforms with a web server and is used to deploy, integrate, execute, and manage Java Platform, Enterprise Edition applications. In this IBM® Redbooks® publication, we describe the application architecture evolution focusing on the value of having DB2 for z/OS as the data server and IBM z/OS® as the platform for traditional and for modern applications. This book provides background technical information about DB2 and WebSphere features and demonstrates their applicability presenting a scenario about configuring WebSphere Version 8.5 on z/OS and type 2 and type 4 connectivity (including the XA transaction support) for accessing a DB2 for z/OS database server taking into account high-availability requirements. We also provide considerations about developing applications, monitoring performance, and documenting issues. DB2 database administrators, WebSphere specialists, and Java application developers will appreciate the holistic approach of this document.

In the simplest terms, Service Oriented Architecture (SOA) is a means by which unlike (or like) systems can communicate with one other despite differences between each system's heritage. The goal of SOA is allow the owning enterprises to combine the functionality of these systems so they can apply the functions to their business needs. This book shows you how you can exploit z/TPF as a transaction server, participating in a Service Oriented Architecture (SOA) structure alongside WebSphere Application Server. After introducing z/TPF and the technologies critical to SOA, we position z/TPF as a provider in an SOA by explaining SOAP processing, communication bindings, and eXtensible Markup Language (XML) on z/TPF. Next, we show an SOA implementation example with z/TPF and WebSphere Application Server and discuss the use of z/TPF and Web services from a client perspective. We conclude with a discussion of z/TPF in an open systems environment. The book is organized as follows: Part 1. Overview and introduction to z/TPF Part 2. z/TPF as a provider in a Service Oriented Architecture Part 3. A Service Oriented Architecture example with z/TPF and WebSphere Application Server Part 4. z/TPF and Web Services from a client perspective Part 5. z/TPF in an open systems environment Please note that the additional material referenced in the text is not available from IBM.

Architect IBM® WebSphere® Applications for Maximum Performance, Security, Flexibility, Usability, and Value Successful, high-value WebSphere applications begin with effective architecture. Now, one of IBM's leading WebSphere and WebSphere Portal architects offers a hands-on, best-practice guide to every facet of defining, planning, and implementing WebSphere application architectures. Joey Bernal shows working architects and teams how to define layered architectural standards that can be used across the entire organization, improving application quality without compromising flexibility. Bernal begins by illuminating the role of architecture and the responsibilities of the architect in WebSphere applications and SOA environments. Next, he introduces specific architectural techniques for addressing persistence, application performance, security, functionality, user interaction, and much more. Bernal presents a series of sample architectures drawn from his work with several leading organizations, demonstrating how architectures can evolve to support new layers and changing business requirements. Throughout, his techniques are specific enough to address realistic enterprise challenges, while still sufficiently high-level to be useful in diverse and heterogeneous environments. Coverage includes - Choosing persistence frameworks that serve business requirements without excessive complexity - Avoiding persistence-related problems with performance, security, or application functionality - Designing and deploying effective middle layers and dependent libraries within WebSphere Application Server - Using WebSphere

mechanisms and architectural techniques to avoid common security attacks such as SQL injection - Improving performance with WebSphere Application Server caching, including Distributed Maps and Servlet/JSP fragment caching - Using presentation frameworks to provide fast, robust, and attractive user interaction - Incorporating portals that provide a standardized framework for merging multiple applications Joey Bernal is an Executive IT Specialist with IBM Software Services for Lotus. Senior Certified with IBM as an IT Specialist, he has an extensive background in designing and developing Web and Portal Applications. He often leads IBM teams that have assisted dozens of clients in leveraging WebSphere Portal to address architecture, design, and implementation challenges. A frequent speaker on WebSphere and portal topics, Bernal is coauthor of Pro ...

IBM® Rational® Application Developer for WebSphere® Software V7.0 (for short, Rational Application Developer) is the full function Eclipse 3.2 based development platform for developing Java™ 2 Platform Standard Edition (J2SE™ ) and Java 2 Platform Enterprise Edition (J2EE™ ) applications with a focus on applications to be deployed to IBM WebSphere Application Server and IBM WebSphere Portal. Rational Application Developer provides integrated development tools for all development roles, including Web developers, Java developers, business analysts, architects, and enterprise programmers. Rational Application Developer is part of the IBM Rational Software Delivery Platform (SDP), which contains products in four life cycle categories: - Architecture management, which includes integrated development environments (Application Developer is here) - Change and release management - Process and portfolio management - Quality management This IBM Redbooks® publication is a programming guide that highlights the features and tooling included with Rational Application Developer V7.0. Many of the chapters provide working examples that demonstrate how to use the tooling to develop applications, as well as achieve the benefits of visual and rapid application development. This publication is an update of Rational Application Developer V6 Programming Guide, SG24-6449. This book consists of six parts: - Introduction to Rational Application Developer - Develop applications - Test and debug applications - Deploy and profile applications - Team development - Appendixes

The Hands-On Guide to Thriving with Web 2.0 and Social Networking Deepen employee and coworker relationships, improve productivity, strengthen collaboration, and boost creativity Embrace, support, and manage social networking so it works for you, not against you Best practices and new case studies from IBM® and many of its most innovative portal and social networking sites This book provides hands-on, start-to-finish guidance for business and IT decision-makers who want to drive value from Web 2.0 and social networking technologies. IBM expert Joey Bernal systematically identifies business functions and innovations these technologies can enhance and presents best-practice patterns for using them in both internal- and external-facing applications. Drawing on the immense experience of IBM and its customers, Bernal addresses both the business and technical issues enterprises must manage to succeed. He offers insights and case studies covering multiple technologies, including AJAX, REST, Atom/RSS, enterprise taxonomies, tagging, folksonomies, portals, mashups, blogs, wikis, and more. He also presents practical guidance for building robust, secure, collaborative applications by using applications and services from multiple sources with powerful tools such as WebSphere® Portal, Lotus® Connections, and IBM Mashup Center.

Define, model, implement, and monitor real-world BPEL 2.0 business processes with SOA-powered BPM for IBM WebSphere 7 with this book and eBook.

"This book thoroughly covers WebSphere Application Server Version 5.0 and 5.1: both IBM Base WebSphere Application Server offerings and the advanced scalability and failover capabilities built into the popular IBM Network Deployment Edition. It has been designed to serve both as a comprehensive learning tool and as a rapid reference for working professionals."--Jacket.

Build and Deploy Mobile Business Apps That Smoothly Integrate with Enterprise IT For today's enterprises, mobile apps can have a truly transformational impact. However, to maximize their value, you can't build them in isolation. Your new mobile apps must reflect the revolutionary mobile paradigm and delight today's mobile users--but they must also integrate smoothly with existing systems and leverage previous generations of IT investment. In this guide, a team of IBM's leading experts show how to meet all these goals. Drawing on extensive experience with pioneering enterprise clients, they cover every facet of planning, building, integrating, and deploying mobile apps in large-scale production environments. You'll find proven advice and best practices for architecture, cloud integration, security, user experience, coding, testing, and much more. Each chapter can stand alone to help you solve specific real-world problems. Together, they help you establish a flow of DevOps activities and lifecycle processes fully optimized for enterprise mobility.

This book is about IBM's WebSphere Application Server V3.5., the Standard and Advanced editions. It will be a "must have" WebSphere handbook.

Straight from IBM, the official guide on WebSphere deployment and administrative model.

Build SOA-based flexible, economical, and efficient applications for IBM WebSphere Process Server 7 and Enterprise Service Bus 7 with this book and eBook.

From the very 1st chapter, this book tackles the main technique of WebSphere Application Server deployment, and provides the necessary tools to design and manage a realistic Websphere technical integration. Topics include: \* Offers clear understanding of the WebSphere Application Server installation and configuration \* Provides a complete guide to creating a WebSphere development environment with both WebSphere Studio Site Developer and WebSphere Studio Application Developer \* Includes extensive coverage of development for WebSphere including EJBs, JavaServer Pages, and Servlets \* Offers WebSphere Administrators solutions for session management and application packaging and more....

This IBM® Redbooks® publication brings together subject matter experts with experience using the leading IBM customer interaction platform for cross-channel and online commerce, IBM WebSphere® Commerce, with the powerful IBM Sterling Order Management, which coordinates order fulfillment from all channels and across the extended enterprise. An integrated solution was built in the lab that illustrates how these products can be integrated to benefit IBM customers. This publication focuses on the integration of the IBM high-volume commerce solution designed to address enterprise commerce needs by delivering a rich, robust multi-channel customer experience, with Sterling Order Management, designed to enable supplier collaboration with management and order fulfillment process optimization. By integrating WebSphere Commerce and Sterling Order Management with out-of-the-box components, we prove that customers are provided an end-to-end solution to address a complete opportunity for a fulfillment life cycle that is cost effective and easy to implement. This publication targets a technical audience for the documentation of the integration approach by explaining the solution architecture and the implementation details. However, this publication also contains introductory chapters that contain executive summary material and provides well-documented scenarios with use cases for business analysts whose domain would be these systems.

IBM DB2® for z/OS® is a high-performance database management system (DBMS) with a strong reputation in traditional high-volume transaction workloads that are based on relational technology. IBM WebSphere® Application Server is web application server software that runs on most platforms with a web server and is used to deploy, integrate, execute, and manage Java Platform, Enterprise Edition applications. In this IBM® Redbooks® publication, we describe the application architecture evolution focusing on the value of having DB2 for z/OS as the data server and IBM z/OS® as the platform for traditional and for modern applications. This book provides background technical information about DB2 and WebSphere features and demonstrates their applicability presenting a scenario about configuring WebSphere Version 8.5 on z/OS and type 2 and type 4 connectivity (including the XA transaction support) for accessing a DB2 for z/OS database server taking into account high-availability requirements. We also provide considerations about developing applications, monitoring performance, and documenting issues. DB2 database administrators, WebSphere specialists, and Java application developers will appreciate the holistic approach of this document. Please note that the additional material referenced in the text is not available from IBM.

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