Sun Java Application Server Documentation

*J2EE 5 is a hot, emerging topic; timely to market *Book covers all other neww J2EE-related technologies, like EJB 3, JSP 2.1, etc. *Previous edition on 1.4 was excellent seller, with consistent low Amazon rank

You can choose several data access frameworks when building Java enterprise applications that work with relational databases. But what about big data? This hands-on introduction shows you how Spring Data makes it relatively easy to build applications across a wide range of new data access technologies such as NoSQL and Hadoop. Through several sample projects, you'll learn how Spring Data provides a consistent programming model that retains NoSQL-specific features and capabilities, and helps you develop Hadoop applications across a wide range of use-cases such as data analysis, event stream processing, and workflow. You'll also discover the features Spring Data adds to Spring's existing JPA and JDBC support for writing RDBMS-based data access layers. Learn about Spring's template helper classes to simplify the use of database-specific functionality Explore Spring Data's repository abstraction and advanced query functionality Use Spring Data with Redis (key/value store), HBase (column-family), MongoDB (document database), and Neo4j (graph database) Discover the GemFire distributed data grid solution Export Spring Data JPA-managed entities to the Web as RESTful web services Simplify the development of HBase applications, using a lightweight object-mapping framework Build example big-data pipelines with Spring Batch and Spring Integration

Managing mixed Linux/Windows environments real-world configuration, programming, and administration, this title covers a wide range of interoperability issues: Internet/intranet, TCP/IP, dial-up access, software, backup/restore, security, file/print, and more. Contains practical Linux/Windows network design and implementation solutions.

A step-by-step guide to delivering high-value solutions, Getting Started with Sun ONE covers planning, designing, configuring, integrating, and implementing Sun ONE Internet infrastructures. Drawing on his first-hand experience supporting Sun ONE customers, Thurston describes the Sun ONE Application Server, Directory Server, and Web Server, and provides expert guidance on building business applications with Sun ONE Studio 4. Book jacket.

This book constitutes the refereed proceedings of the 21st European Conference on Object-Oriented Programming, ECOOP 2007, held in Berlin, Germany in July/August 2007. The 25 revised full papers, presented together with 3 invited talks were carefully reviewed and selected from a total of 135 final submissions. The papers are organized in topical sections on types, runtime implementation, empirical studies, programs and predicates, language design, inheritance and derivation, aspects, as well as language about language.

Flash Remoting MX lets developers easily integrate rich Macromedia Flash content with applications that are built using Macromedia ColdFusion MX, Microsoft .NET, Java, PHP, or SOAP-based web services. The result is complex client/server applications that more closely resemble desktop applications than traditional web pages. Gone is the click/wait/reload approach of HTML. Your web application uses Flash as the front end while Flash Remoting handles the communication behind the scenes with the application server. All the end user knows is that it's fast and flexible.The potential uses for Flash Remoting are endless. Flash Remoting: The Definitive Guide will help you understand this breakthrough technology and use it to build your own Rich Internet Applications (RIAs). Build applications that connect to a database, file system, or other server-side technologies. Or, use Flash Remoting to create: online stores that feature catalogs and shopping cart systems sound and video clip libraries banner ads with built-in shopping carts, click-through tracking, and site search capabilities new controls that can be used in place of HTML extensions to Flash, Dreamweaver, Fireworks, and more front-ends to databases for administrators The book begins with Flash Remoting basics: setup, installation and an introduction to its underlying concepts. Next, you'll explore the Flash's User Interface components as they relate to Flash Remoting. Then, you'll gain insights into Flash Remoting internals and the Remoting API. The book is rich with examples that you will be able to run on your own system.The next section focuses on the server-side environment that you'll use for your applications. Individual chapters cover Flash Remoting with ColdFusion, Server-Side ActionScript, Java, ASP.NET, and PHP.The last section covers more advanced Flash Remoting techniques, such as calling web services from Flash Remoting, extending objects and UI controls, best practices, and debugging. Plus there is a detailed chapter demonstrating a real-world application. The book concludes with a Flash Remoting API reference.Developers who are looking to create Rich Internet Applications with Flash will find Flash Remoting: The Definitive Guide indispensable.

Beginning Database-Driven Application Development in JavaTM EE: Using GlassFishTM focuses on the open source GlassFish persistence engine. This book shows Java programmers how to develop applications utilizing relational database technologies with examples using Oracle and MySQL and the GlassFish application development framework and deployment platform all based on Java EE. The book explains in detail how you can organize your Java EE solution into a multilayer architecture, placing most emphasis on how to implement the persistence and database tiers of an application. Through many examples, this book shows how you can efficiently use the Java Persistence features available in the Java EE platform. Find out how you can greatly simplify the task of building the persistence layer of your Java EE application by moving some application logic into the underlying database, utilizing database views, stored programs, and triggers. The book also explains how to deploy Java EE applications to GlassFish, a free, open source Java EE 5–compliant application server.

JBoss in Action is the first book to focus on teaching readers in detail how to use the JBoss application server. Unlike other titles about JBoss, the authors of JBoss in Action go deeper into the

advanced features and configuration of the server. In particular, it focuses on enterprise-class topics, such as high availability, security, and performance. This book walks readers through the JBoss 5 Application Server from installation to configuration to production development. It shows how to configure the server's various component containers such as the JBoss Web Server, the EJB 3 server, and JBoss Messaging. It also provides detailed insight into configuring the various component services such as security, performance, and clustering. Beyond coverage of the core application server, the book also teaches how to use some of the "hot" technologies that run on top of the application server, such as Jboss Seam and JBoss Portal. Purchase of the print book comes with an offer of a free PDF, ePub, and Kindle eBook from Manning. Also available is all code from the book. The authors, both seasoned professional experts at developing and administering JBoss, provide meaningful explanations and background on many topics which they tie in with their own practical, real-world advice from their collective experience. These uniquely comprehensive explanations and the wide coverage provided in this book surpass any other content currently available in any other book, article, or documentation on the subject. This book provides the definitive description of the JDBC API, the technology that enables universal data access for the Java programming language. This new edition has been updated and expanded to cover all of the JDBC 2.0 API, including the JDBC 2.0 core API and the JDBC Standard Extension API, the package that facilitates building server-side applications. Containing in-depth explanations that go beyond the specification, this complete resource pairs a step-by-step tutorial with a comprehensive reference to all of the classes and interfaces. For those new to Java technology, this book includes an introduction to the Java programming language and to SQL. It builds on this basic knowledge to walk you through creating a JDBC application - from setting up a database and establishing a connection to retrieving values from result sets and using prepared statements. In addition, the authors provide many examples along the way that demonstrate how to execute common tasks. It then proceeds to more advanced topics, focusing on the new features of the JDBC 2.0 API, including scrollable and updatable result sets, batch updates, SQL3 data types, custom mapping, and more.
Administer and configure the GlassFish v2 application server.
The Internet Encyclopedia in a 3-volume reference work on the internet as a business tool, IT platform, and communications and commerce medium.
A tutorial introducing Java basics covers programming principles, integrating applets with Web applications, and using threads, arrays, and sockets.
Consisting of a number of well-known open source products, JBoss is more a family of interrelated services than a single monolithic application. But, as with any tool that's as feature-rich as JBoss, there are number of pitfalls and complexities, too. Most developers struggle with the same issues when deploying J2EE applications on JBoss: they have trouble getting the many J2EE and JBoss deployment descriptors to work together; they have difficulty finding out how to get started; their projects don't have a packaging and deployment strategy that grows with the application; or, they find the Class Loaders confusing and don't know how to use them, which can cause problems. JBoss at Work: A Practical Guide helps developers overcome these challenges. As you work through the book, you'll build a project using extensive code examples. You'll delve into all the major facets of J2EE application deployment on JBoss, including JSPs, Servlets, EJBs, JMS, JNDI, web services, JavaMail, JDBC, and Hibernate. With the help of this book, you'll: Implement a full J2EE application and deploy it on JBoss Discover how to use the latest features of JBoss 4 and J2EE 1.4, including J2EE-compliant web services Master J2EE application deployment on JBoss with EARs, WARs, and EJB JARs Understand the core J2EE deployment descriptors and how they integrate with JBoss-specific descriptors Base your security strategy on JAAS Written for Java developers who want to use JBoss on their projects, the book covers the gamut of deploying J2EE technologies on JBoss, providing a brief survey of each subject aimed at the working professional with limited time. If you're one of the legions of developers who have decided to give JBoss a try, then JBoss at Work: A Practical Guide is your next logical purchase. It'll show you in plain language how to use the fastest growing open source tool in the industry today. If you've worked with JBoss before, this book will get you up to speed on JBoss 4, JBoss WS (web services), and Hibernate 3.
Sun Web Server: The Essential Guide William Nelson • Arvind Srinivasan • Murthy Chintalapati (CVR) Foreword by Scott G. McNealy The authoritative, comprehensive guide to Sun Web Server 7.0 Sun Web Server is the secure web serving platform of choice for large-scale enterprises in industries from finance and telecommunications to travel and government. Now there's a complete, detailed guide to the latest Sun Web Server 7.0 release. Drawing on unsurpassed experience both training and supporting Sun's enterprise customers, this book's authors cover everything that developers, administrators, and architects need to know to implement and support Sun Web Server 7.0 within a single node or across an entire server farm. Server administrators will find task-focused coverage and hands-on examples for installation, configuration, cluster management, monitoring, and troubleshooting. Developers and architects will gain powerful insights into Sun Web Server's internals and learn how to extend its built-in functionality. Enterprise deployment specialists will find indispensable information on sizing and tuning, plus reference configurations to deploy advanced Web 2.0–style dynamic web sites. Whatever your role, this book will help you hit the ground running and get superior results for years to come. Coverage includes • Taking advantage of Sun Web Server 7.0's powerful new features • Walking through initial installations and upgrades • Customizing Sun Web Server's HTTP request processing to your specific requirements • Building dynamic content with scripting languages and server-side Java-based extensions • Creating secure dynamic Web 2.0 sites with your dynamic content and database technologies of choice • Monitoring server instances in live production environments and optimizing performance • Resolving server errors and other anomalies in Web Server runtime behavior • Using actual server configuration files from Sun's own large-scale technology deployments • Using the detailed reference information on Sun Web Server's main server configuration file About the Web Site This book's companion web site, www.sunwebserver.com, contains FAQs, errata, answers to self-paced exercises, and links to download locations and product forums.
IBM WebSphere Application Server 8.0 Administration Guide is a highly practical, example-driven tutorial. You will be introduced to WebSphere Application Server 8.0, and guided through configuration, deployment, and tuning for optimum performance. If you are an administrator who wants to get up and running with IBM WebSphere Application Server 8.0, then this book is not to be missed. Experience with WebSphere and Java would be an advantage, but is not essential.
What is this book about? The results of using J2EE in practice are often disappointing: applications are often slow, unduly complex, and take too long to develop. Rod Johnson believes that the problem lies not in J2EE itself, but in that it is often used badly. Many J2EE publications advocate approaches that, while fine in theory, often fail in reality, or

deliver no real business value. Expert One-on-One: J2EE Design and Development aims to demystify J2EE development. Using a practical focus, it shows how to use J2EE technologies to reduce, rather than increase, complexity. Rod draws on his experience of designing successful high-volume J2EE applications and salvaging failing projects, as well as intimate knowledge of the J2EE specifications, to offer a real-world, how-to guide on how you too can make J2EE work in practice. It will help you to solve common problems with J2EE and avoid the expensive mistakes often made in J2EE projects. It will guide you through the complexity of the J2EE services and APIs to enable you to build the simplest possible solution, on time and on budget. Rod takes a practical, pragmatic approach, questioning J2EE orthodoxy where it has failed to deliver results in practice and instead suggesting effective, proven approaches. What does this book cover? In this book, you will learn When to use a distributed architecture When and how to use EJB How to develop an efficient data access strategy How to design a clean and maintainable web interface How to design J2EE applications for performance Who is this book for? This book would be of value to most enterprise developers. Although some of the discussion (for example, on performance and scalability) would be most relevant to architects and lead developers, the practical focus would make it useful to anyone with some familiarity with J2EE. Because of the complete design-deployment coverage, a less advanced developer could work through the book along with a more introductory text, and successfully build and understand the sample application. This comprehensive coverage would also be useful to developers in smaller organisations, who might be called upon to fill several normally distinct roles. What is special about this book? Wondering what differentiates this book from others like it in the market? Take a look: It does not just discuss technology, but stress its practical application. The book is driven from the need to solve common tasks, rather than by the elements of J2EE. It discuss risks in J2EE development It takes the reader through the entire design, development and build process of a non-trivial application. This wouldn't be compressed into one or two chapters, like the Java Pet Store, but would be a realistic example comparable to the complexity of applications readers would need to build. At each point in the design, alternative choices would be discussed. This would be important both where there's a real problem with the obvious alternative, and where the obvious alternatives are perhaps equally valid. It emphasizes the use of OO design and design patterns in J2EE, without becoming a theoretical book

* Only in-depth guide on the market focused purely on telling J2EE developers exactly what they need to know to get their J2EE applications up and running on Oracle AS 10g. * Covers the very latest release and provides tons of tips/workarounds compiled by an expert author during numerous projects. * Compares and contrasts the Oracle AS 10g implementation to other J2EE application servers (particularly WebLogic, WebSphere and JBoss), taking advantage of the experience many readers already have with those products. This makes it an ideal book for anyone migrating to 10G from another app server.

A guide to administering WebLogic server covers such topics as architecture, domains, clustering, and monitoring.

This example-driven book offers a thorough introduction to Java's APIs for XML Web Services (JAX-WS) and RESTful Web Services (JAX-RS). Java Web Services: Up and Running takes a clear, pragmatic approach to these technologies by providing a mix of architectural overview, complete working code examples, and short yet precise instructions for compiling, deploying, and executing an application. You'll learn how to write web services from scratch and integrate existing services into your Java applications. With Java Web Services: Up and Running, you will: Understand the distinction between SOAP-based and REST-style services Write, deploy, and consume SOAP-based services in core Java Understand the Web Service Definition Language (WSDL) service contract Recognize the structure of a SOAP message Learn how to deliver Java-based RESTful web services and consume commercial RESTful services Know security requirements for SOAP- and REST-based web services Learn how to implement JAX-WS in various application servers Ideal for students as well as experienced programmers, Java Web Services: Up and Running is the concise guide you need to start working with these technologies right away.

Direct from the Source! The authoritative step-by-step guide to developing enterprise applications for Java EE.

Installation guideGA27-3678-04The Java EE 5 TutorialPrentice Hall Professional

Jakarta Tomcat is not only the most commonly used open source servlet engine today, it's become the de facto standard by which other servlet engines are measured. Powerful and flexible, it can be used as a stand-alone web server or in conjunction with another server, like Apache or IIS, to run servlets or JSPs. But mastery of Tomcat is not easy: because it's as complex as it is complete. Tomcat: The Definitive Guide answers vexing questions that users, administrators, and developers alike have been asking. This concise guide provides much needed information to help harness Tomcat's power and wealth of features.Tomcat: The Definitive Guide offers something for everyone who uses Tomcat. System and network administrators will find detailed instructions on installation, configuration, and maintenance. For users, it supplies insightful information on how to deploy Tomcat. And seasoned enterprise Java developers will have a complete reference to setting up, running, and using this powerful softwareThe book begins with an introduction to the Tomcat server and includes an overview of the three types of server configurations: stand-alone, in-process, and out-of-process. The authors show how directories are laid out, cover the initial setup, and describe how to set the environment variables and modify the configuration files, concluding with common errors, problems, and solutions. In subsequent chapters, they cover: The server.xml configuration file Java Security manager Authentication schemes and Tomcat users The Secure Socket Layer (SSL) Tomcat JDBC Realms Installing servlets and Java Server Pages Integrating Tomcat with Apache Advanced Tomcat configuration and much more.Tomcat: The Definitive Guide covers all major platforms, including Windows, Solaris, Linux, and Mac OS X, contains details on Tomcat configuration files, and has a quick-start guide to get developers up and running with Java servlets and JavaServer Pages. If you've struggled with this powerful yet demanding technology in the past, this book will provide the answers you need.

The Java EE 7 Tutorial: Volume 2, Fifth Edition, is a task-oriented, example-driven guide to developing enterprise applications for the Java Platform, Enterprise Edition 7 (Java EE 7). Written by members of the Java EE documentation team at Oracle, this book provides new and intermediate Java programmers with a deep understanding of the platform. This guide includes descriptions of platform features and

provides instructions for using the latest versions of NetBeans IDE and GlassFish Server Open Source Edition. The book introduces Enterprise JavaBeans components, the Java Persistence API, the Java Message Service (JMS) API, Java EE security, transactions, resource adapters, Java EE Interceptors, Batch Applications for the Java Platform, and Concurrency Utilities for Java EE. The book culminates with three case studies that illustrate the use of multiple Java EE 7 APIs.

Includes more than 30 percent revised material and five new chapters, covering the new 2.1 features such as EJB Timer Service and JMS as well as the latest open source Java solutions The book was developed as part of TheServerSide.com online EJB community, ensuring a built-in audience Demonstrates how to build an EJB system, program with EJB, adopt best practices, and harness advanced EJB concepts and techniques, including transactions, persistence, clustering, integration, and performance optimization Offers practical guidance on when not to use EJB and how to use simpler, less costly open source technologies in place of or in conjunction with EJB

This book aims serving students, developers, technical leads and to some extent project managers or consultants by demonstrating a structured documented modestly sized project. Learning the project development and documentation is done through the construction of Book Management and Sales System using MySQL Community Server as the data store with Java Server Pages as the programming environment of choice. Finally, the project developed is deployed using Sun Java System Application Server 9.1 Update 2. This is something application developers would definitely appreciate.

Provides example programs and their source code to explore concepts and technologies including Enterprise JavaBeans, JavaServer Pages, Java Message Service, and Java Naming and Directory Interface.

The Only Complete Guide and Reference for NetBeans(TM) IDE 5.0 The award-winning NetBeans(TM) IDE eases all aspects of Java application development, incorporating a wide range of powerful features into one well-designed package. NetBeans IDE is consistently first in supporting the latest Java technologies for developing desktop, web, enterprise, and mobile applications. "NetBeans(TM) IDE Field Guide" provides an introduction to the IDE and an extensive range of topics to help you with both everyday and advanced programming tasks, including Taking advantage of the Ant-based project system to create easily deployable projectsDeveloping web applications with the built-in Apache Tomcat web serverConstructing, assembling, and verifying large-scale Java EE applicationsManaging the Sun Java System Application Server through NetBeans IDEDeveloping mobile applications with the NetBeans Mobility PackIn this expanded second edition, you can also learn how toBuild powerful and attractive desktop applications with the Matisse GUI BuilderProfile your applications for performance issuesDevelop modules for NetBeans IDE and rich-client applications based on the NetBeans PlatformChat and share code with other developers using the NetBeans Collaboration Modules

"Ryan clearly understands the GWT value proposition and how GWT integrates into a diverse web technology stack—and not just in a theoretical way. With the popularity of gpokr.com and kdice.com, Ryan can speak with the authority of concrete success." —Bruce Johnson, creator of Google Web Toolkit "This book distinguishes itself from other books on GWT in that it walks through the entire process of building several nontrivial GWT applications, not the toy applications that most books present." —R. Mark Volkmann, Object Computing, Inc. "Google™ Web Toolkit Applications is an excellent resource for any GWT developer. Solutions to challenges commonly encountered in GWT are presented through the design and development of actual applications. The applications developed throughout the text demonstrate best practices from simple UI design all the way to custom code generation, and are presented with little pretext about the amount of Java knowledge a given developer may have. Advanced concepts are not withheld but are presented in a way that will be understood by both novice and seasoned developers alike. Good application development practices and proper Model View Controller design is reinforced throughout the book, nearly guaranteeing that the reader will come away a better programmer. " —Jason Essington, Senior Web/Java Engineer, Green River Computing "Dewsbury's Google™ Web Toolkit Applications is a book for both experts and beginner programmers who want to discover this open source Java software development framework, as well as write Ajax applications. A very detailed book!" —Massimo Nardone, Advisory IT Security Architect Accelerate and Simplify Ajax Development with Google Web Toolkit Get the edge you need to deliver exceptional user experiences with Google™ Web Toolkit Applications, a guidebook that provides web developers with core information and instructions for creating rich web applications. Whether you're a developer who needs to build a high-performance front end for Java, PHP, or Ruby applications, or to integrate with external web services, this resource from expert Google Web Toolkit (GWT) developer Ryan Dewsbury delivers the in-depth coverage you'll need. In this valuable book, insider Ryan Dewsbury provides instructions for using the robust tool set and gets you on your way to creating first-class web applications by providing a comprehensive overview of GWT technology. In addition, he shares his "in-the-trenches" insights on Building elegant and responsive user interfaces with Cascading Style Sheets and GWT's Widgets and Panels Creating seamless user experiences through asynchronous communication with HTTP, REST, JSON/JSONP, and RPC Interoperating with web standards—such as XML, RSS, and Atom—and web services—such as Google Maps, Amazon Books, Yahoo! Search, Flickr, and Blogger Overcoming browser security restrictions, such as HTTP's two-connection limit and the Same-Origin policy Accelerating development, using software engineering, code generation, internationalization, application patterns, and Java tools Deploying for optimal performance with resource compression and caching Building five non-trivial applications: a gadget application with a rich drag-and-drop interface, a multi-search application that makes requests to many search engines, a blog editor application for managing entries across multiple blogs, a web-based instant messenger, and a database manager for a traditional web page This practical guide to GWT introduces you to the technology; provides techniques, tips, and examples; and puts you on the road to delivering top-notch user experiences for your web applications.

From lambda expressions and JavaFX 8 to new support for network programming and mobile development, Java 8 brings a wealth of changes. This cookbook helps you get up to speed right away with hundreds of hands-on recipes across a broad range of Java topics. You'll learn useful techniques for everything from debugging and data structures to GUI development and functional programming. Each recipe includes self-contained code solutions that you can freely use, along with a discussion of how and why they work. If you are familiar with Java basics, this cookbook will bolster your knowledge of the language in general and Java 8's main APIs in particular. Recipes include: Methods for compiling, running, and debugging Manipulating, comparing, and rearranging text Regular expressions for string- and pattern-matching Handling numbers, dates, and times Structuring data with collections, arrays, and other types Object-oriented and functional programming techniques Directory and filesystem operations Working with graphics, audio, and video GUI development, including JavaFX and handlers Network programming on both client and server Database access, using JPA, Hibernate, and JDBC Processing JSON and XML for data storage Multithreading and concurrency

This IBM® Redbooks® publication provides information about the concepts, planning, and design of IBM WebSphere® Application Server V8 environments. The target audience of this book is IT architects and consultants who want more information about the planning and designing of application-serving environments, from small to large, and complex implementations. This book addresses the packaging and features in WebSphere Application Server V8 and highlights the most common implementation topologies. It provides information about planning for specific tasks and components that conform to the WebSphere Application Server environment. Also in this book are planning guidelines for WebSphere Application Server V8 and WebSphere

Application Server Network Deployment V8 on distributed platforms and for WebSphere Application Server for z/OS® V8. This book contains information about migration considerations when moving from previous releases.

Java EE and .NET Interoperability addresses issues encountered during the integration process, such as a diverse technology set, incompatible APIs, and disparate environment maintenance. The experienced authors outline strategies, approaches, and best practices, including messaging, Web services, and integration-related frameworks and patterns. The book also introduces readers to Service Oriented Architecture (SOA), the building block for scalable and reliable enterprise integration solutions. This indispensable book provides the Java EE and .NET developer community with multiple strategies to integrate between Java EE and .NET platforms that save developers time and effort. Applying proven interoperability solutions significantly reduces the application development cycle. Coverage includes · Effective Java EE—.NET integration strategies and best practices · Detailed enterprise coverage, as well as standalone Java EE component integration with .NET · SOA as a building block for Java EE—.NET interoperability · Interoperability security issues and risk mitigation · Managing reliability, availability, and scalability for Web services built on Java EE and .NET · The latest interoperability standards and specifications, including Web SSO MEX and WS-Management · Current interoperability technologies, such as Windows Communication Foundation, WSE 3.0, JAX-WS, and Enterprise Service Bus

This text introduces students to the concepts of building Web-distributed applications and helps develop the necessary skills through numerous examples, projects, case studies and hands-on examples.

This book takes the reader through the details of the EJB 3.0 architecture, and shows how EJB can be used to develop powerful, standards-based backend business logic. It offers practical insights into the entire EJB architecture, covering all areas of the EJB 3.0 specification, including its new persistence framework, simplified development model, and other key new features. In addition, it covers upgrade headaches: common issues encountered when migrating from EJB 2.1 to EJB 3.0, highly relevant to existing EJB developers. The book is designed to be the first and only comprehensive beginning or introductory EJB 3 book to market.

InfoWorld is targeted to Senior IT professionals. Content is segmented into Channels and Topic Centers. InfoWorld also celebrates people, companies, and projects.

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