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KEY=DEVELOPER - PAOLA DIAZ

ORACLE FUSION DEVELOPER GUIDE

BUILDING RICH INTERNET APPLICATIONS WITH ORACLE ADF BUSINESS COMPONENTS AND ORACLE ADF FACES

McGraw Hill Professional Master Oracle Fusion Middleware Successfully design rich enterprise web applications using the detailed information in this Oracle Press volume. Oracle Fusion Developer Guide goes beyond the predominant drag-and-drop methods in Oracle JDeveloper 11g and provides a wealth of examples that address common development scenarios when using Oracle Fusion Middleware. Work with Oracle JDeveloper 11g, define navigation rules, accept and validate user input, build page layouts and skins, and incorporate drag-and-drop functionality into web applications. This authoritative resource also explains how to secure and internationalize your applications. Understand the Oracle Application Development Framework and Oracle ADF Faces Rich Client lifestyle Construct Oracle ADF data controls, task flows, and dynamic regions Graphically represent information with Oracle ADF Faces DVT components Modularize applications using Oracle ADF libraries, Oracle ADF task flows, and other reusable components Define dynamic navigation rules in Oracle Fusion Middleware web applications Leverage Web 2.0 features using Oracle ADF Faces Rich Client components Control user access with Oracle WebLogic Server and Oracle ADF security For a complete list of Oracle Press titles, visit www.OraclePressBooks.com

EXPLORING ENTERPRISE SERVICE BUS IN THE SERVICE-ORIENTED ARCHITECTURE PARADIGM

IGI Global Web browsing would not be what it is today without the use of Service-Oriented Architecture (SOA). Although much has been written about SOA methodology, this emerging platform is continuously under development. Exploring Enterprise Service Bus in the Service-Oriented Architecture Paradigm is a detailed reference source that examines current aspects and research methodologies that enable enterprise service bus to unify and connect services efficiently on a common platform. Featuring relevant topics such as SOA reference architecture, grid computing applications, complex event computing, and java business integration, this is an ideal resource for all practitioners, academicians, graduate students, and researchers interested in the discoveries on the relationship that Service-Oriented architecture and enterprise service bus share.

WSO2 DEVELOPER'S GUIDE

SOA AND DATA SERVICES WITH WSO2 ENTERPRISE INTEGRATOR

Packt Publishing Ltd WSO2 Made Simple – dive deep into the core concepts of WSO2 to overcome the challenges faced while using the Enterprise Integrator About This Book Design, create, and publish services in the WSO2 technology Integrate the WSO2 Enterprise Integrator with other components and servers Log and test deployed services Who This Book Is For If you are a Java solutions architect or developer and are keen to understand how to build enterprise applications with WSO2, this book is for you. No prior knowledge of WSO2 is expected. What You Will Learn Configure WSO2 Enterprise Integrator server in a production environment Create SOAP Proxies and REST APIs Interact with WSO2 Message Broker Write services using the new language: Ballerina Schedule automatic tasks for the services you create Manage log messages depending on the log level of the system Integrate with social networks such as Twitter, Facebook, Instagram, and Yammer Test SOAP Services using the TryIt feature and SoapUI tool Work with Quality of Services In Detail WSO2 Enterprise Integrator brings together the most powerful servers provided by the WSO2 company for your SOA infrastructure. As an Enterprise Service Bus (ESB), WSO2 Enterprise Integrator provides greater flexibility and agility to meet growing enterprise demands, whereas, as a Data Services Server (DSS), it provides an easy-to-use platform for integrating data stores, creating composite views across different data sources, and hosting data services. Using real-world scenarios, this book helps you build a solid foundation in developing enterprise applications with powerful data integration capabilities using the WSO2 servers. The book gets you started by brushing up your knowledge about SOA architecture and how it can be implemented through WSO2. It will help build your expertise with the core concepts of ESB such as building proxies, sequences, endpoints, and how to work with these in WSO2. Going further, you will also get well-acquainted with DSS data service concepts such as configuring data services, tasks, events, testing, and much more. The book will also cover API management techniques. Along with ESB and DSS, you will also learn about business process servers, the rules server and other components that together provide the control and robustness your enterprise applications will need. With practical use cases, the book covers typical daily scenarios you will come across while using these servers to give you hands-on experience. Style and approach The book is a complete guide and helps you get the right start—from understanding SOA architectures to getting valuable experience with two important integration servers such as ESB and DSS. It will include some real-world practical scenarios to help you master the best practices followed right across the industry and overcome the challenges you're likely to face on a daily basis.

PEOPLESOFT DEVELOPER'S GUIDE FOR PEOPLETOOLS & PEOPLECODE

McGraw Hill Professional Oracle is placing its enterprise application strategy at the center of its future growth Oracle PeopleSoft will be phasing out its current reports product soon, and all reports will need to be rewritten in XML Publisher

BUSINESS PROCESS MANAGEMENT DESIGN GUIDE: USING IBM BUSINESS PROCESS MANAGER

IBM Redbooks IBM® Business Process Manager (IBM BPM) is a comprehensive business process management (BPM) suite that provides visibility and management of your business processes. IBM BPM supports the whole BPM lifecycle approach: Discover and document Plan Implement Deploy Manage Optimize Process owners and business owners can use this solution to engage directly in the improvement of their business processes. IBM BPM excels in integrating role-based process design, and provides a social BPM experience. It enables asset sharing and creating versions through its Process Center. The Process Center acts as a unified repository, making it possible to manage changes to the business processes with confidence. IBM BPM supports a wide range of standards for process modeling and exchange. Built-in analytics and search capabilities help to further improve and optimize the business processes. This IBM Redbooks® publication provides valuable information for project teams and business people that are involved in projects using IBM BPM. It describes the important design decisions that you face as a team. These decisions invariably have an effect on the success of your project. These decisions range from the more business-centric decisions, such as which should be your first process, to the more technical decisions, such as solution analysis and architectural considerations.

BUSINESS-ORIENTED ENTERPRISE INTEGRATION FOR ORGANIZATIONAL AGILITY

IGI Global "This book explores technical integration challenges with a focus on identifying a viable solution on how to enable rich, flexible, and responsive information links, in support of the changing business operations across organizations"--Provided by publisher.

97 THINGS EVERY CLOUD ENGINEER SHOULD KNOW

"O'Reilly Media, Inc." If you create, manage, operate, or configure systems running in the cloud, you're a cloud engineer—even if you work as a system administrator, software developer, data scientist, or site reliability engineer. With this book, professionals from around the world provide valuable insight into today's cloud engineering role. These concise articles explore the entire cloud computing experience, including fundamentals, architecture, and migration. You'll delve into security and compliance, operations and reliability, and software development. And examine networking, organizational culture, and more. You're sure to find 1, 2, or 97 things that inspire you to dig deeper and expand your own career. "Three Keys to Making the Right Multicloud Decisions," Brendan O'Leary "Serverless Bad Practices," Manases Jesus Galindo Bello "Failing a Cloud Migration," Lee Atchison "Treat Your Cloud Environment as If It Were On Premises," Iyana Garry "What Is Toil, and Why Are SREs Obsessed with It?," Zachary Nickens "Lean QA: The QA Evolving in the DevOps World," Theresa Neate "How Economies of Scale Work in the Cloud," Jon Moore "The Cloud Is Not About the Cloud," Ken Corless "Data Gravity: The Importance of Data Management in the Cloud," Geoff Hughes "Even in the Cloud, the Network Is the Foundation," David Murray "Cloud Engineering Is About Culture, Not Containers," Holly Cummins

ORACLE SERVICE BUS 11G DEVELOPMENT COOKBOOK

Packt Pub Limited This cookbook is full of immediately useable recipes showing you how to develop service and message-oriented (integration) applications on the Oracle Service Bus. In addition to its cookbook style, which ensures the solutions are presented in a clear step-by-step manner, the explanations go into great detail, which makes it good learning material for everyone who has experience in OSB and wants to improve. Most of the recipes are designed in such a way that each recipe is presented as a separate, standalone entity and reading of prior recipes is not required. The finished solution of each recipe is also made available electronically. If you are an intermediate SOA developer who is using Oracle Service Bus to develop service and message-orientated applications on the Oracle Service Bus, then this book is for you. This book assumes that you have a working knowledge of fundamental SOA concepts and Oracle Service Bus.

IBM BUSINESS PROCESS MANAGER V8.5 PERFORMANCE TUNING AND BEST PRACTICES

IBM Redbooks This IBM® Redbooks® publication provides performance tuning tips and best practices for IBM Business Process Manager (IBM BPM) V8.5.5 (all editions) and IBM Business Monitor V8.5.5. These products represent an integrated development and runtime environment based on a key set of service-oriented architecture (SOA) and business process management (BPM) technologies. Such technologies include Service Component Architecture (SCA), Service Data Object (SDO), Business Process Execution Language (BPEL) for web services, and Business Processing Modeling Notation (BPMN). Both IBM Business Process Manager and Business Monitor build on the core capabilities of the IBM WebSphere® Application Server infrastructure. As a result, Business Process Manager solutions benefit from tuning, configuration, and best practices information for WebSphere Application Server and the corresponding platform Java virtual machines (JVMs). This book targets a wide variety of groups, both within IBM (development, services, technical sales, and others) and customers. For customers who are either considering or are in the early stages of implementing a solution incorporating Business Process Manager and Business Monitor, this document proves a useful reference. The book is useful both in terms of best practices during application development and deployment and as a reference for setup, tuning, and configuration information. This book talks about many issues that can influence performance of each product and can serve as a guide for making rational first choices in terms of configuration and performance settings. Similarly, customers who already implemented a solution with these products can use the information presented here to gain insight into how their overall

integrated solution performance can be improved.

PROCESS-DRIVEN SOA

PATTERNS FOR ALIGNING BUSINESS AND IT

CRC Press Process-Driven SOA: Patterns for Aligning Business and IT supplies detailed guidance on how to design and build software architectures that follow the principles of business-IT alignment. It illustrates the design process using proven patterns that address complex business/technical scenarios, where integrated concepts of service-oriented architect

ACCELERATING MODERNIZATION WITH AGILE INTEGRATION

IBM Redbooks The organization pursuing digital transformation must embrace new ways to use and deploy integration technologies, so they can move quickly in a manner appropriate to the goals of multicloud, decentralization, and microservices. The integration layer must transform to allow organizations to move boldly in building new customer experiences, rather than forcing models for architecture and development that pull away from maximizing the organization's productivity. Many organizations have started embracing agile application techniques, such as microservice architecture, and are now seeing the benefits of that shift. This approach complements and accelerates an enterprise's API strategy. Businesses should also seek to use this approach to modernize their existing integration and messaging infrastructure to achieve more effective ways to manage and operate their integration services in their private or public cloud. This IBM® Redbooks® publication explores the merits of what we refer to as agile integration; a container-based, decentralized, and microservice-aligned approach for integration solutions that meets the demands of agility, scalability, and resilience required by digital transformation. It also discusses how the IBM Cloud Pak for Integration marks a significant leap forward in integration technology by embracing both a cloud-native approach and container technology to achieve the goals of agile integration. The target audiences for this book are cloud integration architects, IT specialists, and application developers.

ORACLE E-BUSINESS SUITE DEVELOPMENT & EXTENSIBILITY HANDBOOK

McGraw Hill Professional Extend and Customize Oracle E-Business Suite Transform your Oracle E-Business Suite infrastructure to suit enterprise requirements using the comprehensive development methods in this Oracle Press guide. Oracle E-Business Suite Development & Extensibility Handbook lays out each tool alongside reusable code and step-by-step examples. Learn how to create multiorg objects, integrate Java and PL/SQL, design custom user interfaces, and use Oracle Application Framework and Oracle Workflow. This detailed volume also explains how to work with Oracle XML Gateway, publish dynamic business intelligence reports, and tune your configuration. Manage an efficient development platform with Oracle Application Object Library Develop concurrent programs, customized forms, and personalized graphical user interfaces Securely share data between organizations Distribute business communiqués through Oracle Reports and Oracle Business Intelligence Publisher Develop Java extensions with Oracle JDeveloper and Oracle Application Framework Capture and graphically map business processes using Oracle Workflow Exchange data between applications via Oracle XML Gateway Change the appearance of applications using Custom Look and Feel Integrate Oracle E-Business Suite with service-oriented architecture using Oracle Applications Adapter On Demand

INFOSPHERE DATASTAGE PARALLEL FRAMEWORK STANDARD PRACTICES

IBM Redbooks In this IBM® Redbooks® publication, we present guidelines for the development of highly efficient and scalable information integration applications with InfoSphere™ DataStage® (DS) parallel jobs. InfoSphere DataStage is at the core of IBM Information Server, providing components that yield a high degree of freedom. For any particular problem there might be multiple solutions, which tend to be influenced by personal preferences, background, and previous experience. All too often, those solutions yield less than optimal, and non-scalable, implementations. This book includes a comprehensive detailed description of the components available, and descriptions on how to use them to obtain scalable and efficient solutions, for both batch and real-time scenarios. The advice provided in this document is the result of the combined proven experience from a number of expert practitioners in the field of high performance information integration, evolved over several years. This book is intended for IT architects, Information Management specialists, and Information Integration specialists responsible for delivering cost-effective IBM InfoSphere DataStage performance on all platforms.

CUSTOMER DATA INTEGRATION

REACHING A SINGLE VERSION OF THE TRUTH

John Wiley & Sons "Customers are the heart of any business. But we can't succeed if we develop only one talk addressed to the 'average customer.' Instead we must know each customer and build our individual engagements with that knowledge. If Customer Relationship Management (CRM) is going to work, it calls for skills in Customer Data Integration (CDI). This is the best book that I have seen on the subject. Jill Dyché is to be complimented for her thoroughness in interviewing executives and presenting CDI." -Philip Kotler, S. C. Johnson Distinguished Professor of International Marketing Kellogg School of Management, Northwestern University "In this world of killer competition, hanging on to existing customers is critical to survival. Jill Dyché's new book makes that job a lot easier than it has been." -Jack Trout, author, Differentiate or Die "Jill and Evan have not only written the definitive work on Customer Data Integration, they've made the business case for it. This book offers sound advice to business people in search of innovative ways to bring data together about customers-their most important asset-while at the same time giving IT some practical tips for implementing CDI and MDM the right way." -Wayne Eckerson, The Data Warehousing Institute author of Performance Dashboards: Measuring, Monitoring, and Managing Your Business Whatever business you're in, you're ultimately in the customer business. No matter what your product, customers pay the bills. But the strategic importance of customer relationships hasn't brought companies much closer to a single, authoritative view of their customers. Written from both business and technical perspectives, Customer Data Integration shows companies how to deliver an accurate, holistic, and long-term understanding of their customers through CDI.

ADVANCED WEB SERVICES

Springer Science & Business Media Web services and Service-Oriented Computing (SOC) have become thriving areas of academic research, joint university/industry research projects, and novel IT products on the market. SOC is the computing paradigm that uses Web services as building blocks for the engineering of composite, distributed applications out of the reusable application logic encapsulated by Web services. Web services could be considered the best-known and most standardized technology in use today for distributed computing over the Internet. This book is the second installment of a two-book collection covering the state-of-the-art of both theoretical and practical aspects of Web services and SOC research and deployments. Advanced Web Services specifically focuses on advanced topics of Web services and SOC and covers topics including Web services transactions, security and trust, Web service management, real-world case studies, and novel perspectives and future directions. The editors present foundational topics in the first book of the collection, Web Services Foundations (Springer, 2013). Together, both books comprise approximately 1400 pages and are the result of an enormous community effort that involved more than 100 authors, comprising the world's leading experts in this field.

MANAGING DATA IN MOTION

DATA INTEGRATION BEST PRACTICE TECHNIQUES AND TECHNOLOGIES

Newnes Managing Data in Motion describes techniques that have been developed for significantly reducing the complexity of managing system interfaces and enabling scalable architectures. Author April Reeve brings over two decades of experience to present a vendor-neutral approach to moving data between computing environments and systems. Readers will learn the techniques, technologies, and best practices for managing the passage of data between computer systems and integrating disparate data together in an enterprise environment. The average enterprise's computing environment is comprised of hundreds to thousands computer systems that have been built, purchased, and acquired over time. The data from these various systems needs to be integrated for reporting and analysis, shared for business transaction processing, and converted from one format to another when old systems are replaced and new systems are acquired. The management of the "data in motion" in organizations is rapidly becoming one of the biggest concerns for business and IT management. Data warehousing and conversion, real-time data integration, and cloud and "big data" applications are just a few of the challenges facing organizations and businesses today. Managing Data in Motion tackles these and other topics in a style easily understood by business and IT managers as well as programmers and architects. Presents a vendor-neutral overview of the different technologies and techniques for moving data between computer systems including the emerging solutions for unstructured as well as structured data types Explains, in non-technical terms, the architecture and components required to perform data integration Describes how to reduce the complexity of managing system interfaces and enable a scalable data architecture that can handle the dimensions of "Big Data"

ENTERPRISE INTEGRATION PATTERNS

DESIGNING, BUILDING, AND DEPLOYING MESSAGING SOLUTIONS

Addison-Wesley Enterprise Integration Patterns provides an invaluable catalog of sixty-five patterns, with real-world solutions that demonstrate the formidable of messaging and help you to design effective messaging solutions for your enterprise. The authors also include examples covering a variety of different integration technologies, such as JMS, MSMQ, TIBCO ActiveEnterprise, Microsoft BizTalk, SOAP, and XSL. A case study describing a bond trading system illustrates the patterns in practice, and the book offers a look at emerging standards, as well as insights into what the future of enterprise integration might hold. This book provides a consistent vocabulary and visual notation framework to describe large-scale integration solutions across many technologies. It also explores in detail the advantages and limitations of asynchronous messaging architectures. The authors present practical advice on designing code that connects an application to a messaging system, and provide extensive information to help you determine when to send a message, how to route it to the proper destination, and how to monitor the health of a messaging system. If you want to know how to manage, monitor, and maintain a messaging system once it is in use, get this book.

APPLICATION DEVELOPMENT FOR IBM CICS WEB SERVICES

IBM Redbooks This IBM® Redbooks® publication focuses on developing Web service applications in IBM CICS®. It takes the broad view of developing and modernizing CICS applications for XML, Web services, SOAP, and SOA support, and lays out a reference architecture for developing these kinds of applications. We start by discussing Web services in general, then review how CICS implements Web services. We offer an overview of different development approaches: bottom-up, top-down, and meet-in-the-middle. We then look at how you would go about exposing a CICS application as a Web service provider, again looking at the different approaches. The book then steps through the process of creating a CICS Web service requester. We follow this by looking at CICS application aggregation (including 3270 applications) with IBM Rational® Application Developer for IBM System z® and how to implement CICS Web Services using CICS Cloud technology. The first part is concluded with hints and tips to help you when implementing this technology. Part two of this publication provides performance figures for a basic Web service. We investigate some common variables and examine their effects on the performance of CICS as both a requester and provider of Web services.

SUN TRACKING AND SOLAR RENEWABLE ENERGY HARVESTING

SOLAR ENERGY HARVESTING, TROUGH, PINPOINTING AND HELIOSTAT SOLAR COLLECTING SYSTEMS

Gerro Prinsloo Free to download eBook on Practical Solar Tracking Design, Solar Tracking, Sun Tracking, Sun Tracker, Solar Tracker, Follow Sun, Sun Position calculation (Azimuth, Elevation, Zenith), Sun following, Sunrise, Sunset, Moon-phase, Moonrise, Moonset calculators. In harnessing power from the sun through a solar tracker or solar tracking system, renewable energy system developers require automatic solar tracking software and solar position algorithms. On-axis sun tracking system such as the altitude-azimuth dual axis or multi-axis solar tracker systems use a sun tracking algorithm or ray tracing sensors or software to ensure the sun's passage through the sky is traced with high precision in automated solar tracker applications, right through summer solstice, solar equinox and winter solstice. Eco Friendly and Environmentally Sustainable Micro Combined Solar Heat and Power (m-CHP, m-CCHP, m-CHCP) with Microgrid Storage and Layered Smartgrid Control towards Supplying Off-Grid Rural Villages in developing BRICS countries such as Africa, India, China and Brazil. Off-grid rural villages and isolated islands areas require mCHP and trigeneration solar power plants and associated isolated smart microgrid solutions to serve the community energy needs. This article describes the development progress for such a system, also referred to as solar polygeneration. The system includes a sun tracker mechanism wherein a parabolic dish or lenses are guided by a light sensitive mechanism in a way that the solar receiver is always at right angle to the solar radiation. Solar thermal energy is then either converted into electrical energy through a free piston Stirling, or stored in a thermal storage container. The project includes the thermodynamic modeling of the plant in Matlab Simulink as well as the development of an intelligent control approach that includes smart microgrid distribution and optimization. The book includes aspects in the simulation and optimization of stand-alone hybrid renewable energy systems and co-generation in isolated or islanded microgrids. It focusses on the stepwise development of a hybrid solar driven micro combined cooling heating and power (mCCHP) compact trigeneration polygeneration and thermal energy storage (TES) system with intelligent weather prediction, weak-ahead scheduling (time horizon), and look-ahead dispatch on integrated smart microgrid distribution principles. The solar harvesting and solar thermodynamic system includes an automatic sun tracking platform based on a PLC controlled mechatronic sun tracking system that follows the sun progressing across the sky. An intelligent energy management and adaptive learning control optimization approach is proposed for autonomous off-grid remote power applications, both for thermodynamic optimization and smart micro-grid optimization for distributed energy resources (DER). The correct resolution of this load-following multi objective optimization problem is a complex task because of the high number and multi-dimensional variables, the cross-correlation and interdependency between the energy streams as well as the non-linearity in the performance of some of the system components. Exergy-based control approaches for smartgrid topologies are considered in terms of the intelligence behind the safe and reliable operation of a microgrid in an automated system that can manage energy flow in electrical as well as thermal energy systems. The standalone micro-grid solution would be suitable for a rural village, intelligent building, district energy system, campus power, shopping mall centre, isolated network, eco estate or remote island application setting where self-generation and decentralized energy system concepts play a role. Discrete digital simulation models for the thermodynamic and active demand side management systems with digital smartgrid control unit to optimize the system energy management is currently under development. Parametric simulation models for this trigeneration system (polygeneration, poligeneration, quadgeneration) are developed on the Matlab Simulink and TrnSys platforms. In terms of model predictive coding strategies, the automation controller will perform multi-objective cost optimization for energy management on a microgrid level by managing the generation and storage of electrical, heat and cooling energies in layers. Each layer has its own set of smart microgrid priorities associated with user demand side cycle predictions. Mixed Integer Linear Programming and Neural network algorithms are being modeled to perform Multi Objective Control optimization as potential optimization and adaptive learning techniques.

END-TO-END INTEGRATION WITH IBM STERLING B2B INTEGRATION AND MANAGED FILE TRANSFER SOLUTIONS

IBM Redbooks Across numerous vertical industries, enterprises are challenged to improve processing efficiency as transactions flow from their business communities to their internal systems and vice versa, simplify management and expansion of the external communities, accommodate customer and supplier preferences, govern the flow of information, enforce policy and standards, and protect sensitive information. Throughout this process, external partners must be on-boarded and off-boarded, information must flow across multiple communications infrastructures, and data must be mapped and transformed for consumption across multiple applications. Some transactions require synchronous or real-time processing while others are of a more periodic nature. For some classes of customer or supplier, the enterprise might prefer a locally-managed, on-premise solution. For some types of communities (often small businesses), an as-a-Service solution might be the best option. Many large enterprises combine the on-premise and as-a-Service approach to serve different categories of business partners (customers or suppliers). This IBM® Redbooks® publication focuses on solutions for end-to-end integration in complex value chains and presents several end-to-end common integration scenarios with IBM Sterling and IBM WebSphere® portfolios. We believe that this publication will be a reference for IT Specialists and IT Architects implementing an integration solution architecture involving IBM Sterling and IBM WebSphere portfolios.

MODEL-DRIVEN SOFTWARE DEVELOPMENT

TECHNOLOGY, ENGINEERING, MANAGEMENT

John Wiley & Sons Model-Driven Software Development (MDS) is currently a highly regarded development paradigm among developers and researchers. With the advent of OMG's MDA and Microsoft's Software Factories, the MDS approach has moved to the centre of the programmer's attention, becoming the focus of conferences such as OOPSLA, JAOO and OOP. MDS is about using domain-specific languages to create models that express application structure or behaviour in an efficient and domain-specific way. These models are subsequently transformed into executable code by a sequence of model transformations. This practical guide for software architects and developers is peppered with practical examples and extensive case studies. International experts deliver: * A comprehensive overview of MDS and how it relates to industry standards such as MDA and Software Factories. * Technical details on meta modeling, DSL construction, model-to-model and model-to-code transformations, and software architecture. * Invaluable insight into the software development process, plus engineering issues such as versioning, testing and product line engineering. * Essential management knowledge covering economic and organizational topics, from a global perspective. Get started and benefit from some practical support along the way!

MICROSERVICES FROM THEORY TO PRACTICE: CREATING APPLICATIONS IN IBM BLUEMIX USING THE MICROSERVICES APPROACH

IBM Redbooks Microservices is an architectural style in which large, complex software applications are composed of one or more smaller services. Each of these microservices focuses on completing one task that represents a small business capability. These microservices can be developed in any programming language. They communicate with each other using language-neutral protocols, such as Representational State Transfer (REST), or messaging applications, such as IBM® MQ Light. This IBM Redbooks® publication gives a broad understanding of this increasingly popular architectural style, and provides some real-life examples of how you can develop applications using the microservices approach with IBM Bluemix™. The source code for all of these sample scenarios can be found on GitHub (<https://github.com/>). The book also presents some case studies from IBM products. We explain the architectural decisions made, our experiences, and lessons learned when redesigning these products using the microservices approach. Information technology (IT) professionals interested in learning about microservices and how to develop or redesign an application in Bluemix using microservices can benefit from this book.

BUILDING SMARTER PLANET SOLUTIONS WITH MQTT AND IBM WEBSHERE MQ TELEMETRY

IBM Redbooks MQ Telemetry Transport (MQTT) is a messaging protocol that is lightweight enough to be supported by the smallest devices, yet robust enough to ensure that important messages get to their destinations every time. With MQTT devices such as smart energy meters, cars, trains, satellite receivers, and personal health care devices can communicate with each other and with other systems or applications. This IBM® Redbooks® publication introduces MQTT and takes a scenario-based approach to demonstrate its capabilities. It provides a quick guide to getting started and then shows how to grow to an enterprise scale MQTT server using IBM WebSphere® MQ Telemetry. Scenarios demonstrate how to integrate MQTT with other IBM products, including WebSphere Message Broker. This book also provides typical usage patterns and guidance on scaling a solution. The intended audience for this book ranges from new users of MQTT and telemetry to those readers who are looking for in-depth knowledge and advanced topics.

BMC CONTROL-M 7

A JOURNEY FROM TRADITIONAL BATCH SCHEDULING TO WORKLOAD AUTOMATION

Packt Publishing Ltd Master one of the world's most powerful enterprise workload automation tools? BMC Control-M 7 - using this book and eBook.

GUIDE TO THE SOFTWARE ENGINEERING BODY OF KNOWLEDGE (SWEBOK(R))

VERSION 3.0

In the Guide to the Software Engineering Body of Knowledge (SWEBOK(R) Guide), the IEEE Computer Society establishes a baseline for the body of knowledge for the field of software engineering, and the work supports the Society's responsibility to promote the advancement of both theory and practice in this field. It should be noted that the Guide does not purport to define the body of knowledge but rather to serve as a compendium and guide to the knowledge that has been developing and evolving over the past four decades. Now in Version 3.0, the Guide's 15 knowledge areas summarize generally accepted topics and list references for detailed information. The editors for Version 3.0 of the SWEBOK(R) Guide are Pierre Bourque (Ecole de technologie supérieure (ETS), Université du Québec) and Richard E. (Dick) Fairley (Software and Systems Engineering Associates (S2EA)).

AUTOMATIC SOLAR TRACKING SUN TRACKING SATELLITE TRACKING RASTREADOR SOLAR SEGUIMIENTO SOLAR SEGUIDOR SOLAR AUTOMÁTICO DE SEGUIMIENTO SOLAR

SOLAR TRACKING, INSEGUIMENTO SOLARE, SOL TRACKING, SOL DE SEGUIMIENTO : HIGH PRECISION SOLAR POSITION ALGORITHMS, PROGRAMS, SOFTWARE AND SOURCE-CODE FOR COMPUTING THE SOLAR VECTOR, SOLAR COORDINATES & SUN ANGLES IN MICROPROCESSOR, PLC, ARDUINO, PIC AND PC-BASED SUN TRACKING DEVICES OR DYNAMIC SUN FOLLOWING HARDWARE

Gerro Prinsloo Automatic Solar Tracking Sun Tracking : This book details Automatic Solar-Tracking, Sun-Tracking-Systems, Solar-Trackers and Sun Tracker Systems. An intelligent automatic solar tracker is a device that orients a payload toward the sun. Such programmable computer based solar tracking device includes principles of solar tracking, solar tracking systems, as well as microcontroller, microprocessor and/or PC based solar tracking control to orientate solar reflectors, solar lenses, photovoltaic panels or other optical configurations towards the sun. Motorized space frames and kinematic systems ensure motion dynamics and employ drive technology and gearing principles to steer optical configurations such as mangin, parabolic, conic, or cassegrain solar energy collectors to face the sun and follow the sun movement contour continuously (seguimiento solar y automatización, automatización seguidor solar, tracking solar e automação, automação seguidor solar, inseguimento solare, inseguitore solare, energia termica, sole seguito, posizionatore motorizzato) In harnessing power from the sun through a solar tracker or practical solar tracking system, renewable energy control

automation systems require automatic solar tracking software and solar position algorithms to accomplish dynamic motion control with control automation architecture, circuit boards and hardware. On-axis sun tracking system such as the altitude-azimuth dual axis or multi-axis solar tracker systems use a sun tracking algorithm or ray tracing sensors or software to ensure the sun's passage through the sky is traced with high precision in automated solar tracker applications, right through summer solstice, solar equinox and winter solstice. A high precision sun position calculator or sun position algorithm is this an important step in the design and construction of an automatic solar tracking system. The content of the book is also applicable to communication antenna satellite tracking and moon tracking algorithm source code for which links to free download links are provided. From sun tracing software perspective, the sonnet Tracing The Sun has a literal meaning. Within the context of sun track and trace, this book explains that the sun's daily path across the sky is directed by relatively simple principles, and if grasped/understood, then it is relatively easy to trace the sun with sun following software. Sun position computer software for tracing the sun are available as open source code, sources that is listed in this book. The book also describes the use of satellite tracking software and mechanisms in solar tracking applications. Ironically there was even a system called sun chaser, said to have been a solar positioner system known for chasing the sun throughout the day. Using solar equations in an electronic circuit for automatic solar tracking is quite simple, even if you are a novice, but mathematical solar equations are over complicated by academic experts and professors in text-books, journal articles and internet websites. In terms of solar hobbies, scholars, students and Hobbyist's looking at solar tracking electronics or PC programs for solar tracking are usually overcome by the sheer volume of scientific material and internet resources, which leaves many developers in frustration when search for simple experimental solar tracking source-code for their on-axis sun-tracking systems. This booklet will simplify the search for the mystical sun tracking formulas for your sun tracker innovation and help you develop your own autonomous solar tracking controller. By directing the solar collector directly into the sun, a solar harvesting means or device can harness sunlight or thermal heat. This is achieved with the help of sun angle formulas, solar angle formulas or solar tracking procedures for the calculation of sun's position in the sky. Automatic sun tracking system software includes algorithms for solar altitude azimuth angle calculations required in following the sun across the sky. In using the longitude, latitude GPS coordinates of the solar tracker location, these sun tracking software tools supports precision solar tracking by determining the solar altitude-azimuth coordinates for the sun trajectory in altitude-azimuth tracking at the tracker location, using certain sun angle formulas in sun vector calculations. Instead of follow the sun software, a sun tracking sensor such as a sun sensor or webcam or video camera with vision based sun following image processing software can also be used to determine the position of the sun optically. Such optical feedback devices are often used in solar panel tracking systems and dish tracking systems. Dynamic sun tracing is also used in solar surveying, DNI analyser and sun surveying systems that build solar infographics maps with solar radiance, irradiance and DNI models for GIS (geographical information system). In this way geospatial methods on solar/environment interaction makes use use of geospatial technologies (GIS, Remote Sensing, and Cartography). Climatic data and weather station or weather center data, as well as queries from sky servers and solar resource database systems (i.e. on DB2, Sybase, Oracle, SQL, MySQL) may also be associated with solar GIS maps. In such solar resource modelling systems, a pyranometer or solarimeter is normally used in addition to measure direct and indirect, scattered, dispersed, reflective radiation for a particular geographical location. Sunlight analysis is important in flash photography where photographic lighting are important for photographers. GIS systems are used by architects who add sun shadow applets to study architectural shading or sun shadow analysis, solar flux calculations, optical modelling or to perform weather modelling. Such systems often employ a computer operated telescope type mechanism with ray tracing program software as a solar navigator or sun tracer that determines the solar position and intensity. The purpose of this booklet is to assist developers to track and trace suitable source-code and solar tracking algorithms for their application, whether a hobbyist, scientist, technician or engineer. Many open-source sun following and tracking algorithms and source-code for solar tracking programs and modules are freely available to download on the internet today. Certain proprietary solar tracker kits and solar tracking controllers include a software development kit SDK for its application programming interface API attributes (Pebble). Widget libraries, widget toolkits, GUI toolkit and UX libraries with graphical control elements are also available to construct the graphical user interface (GUI) for your solar tracking or solar power monitoring program. The solar library used by solar position calculators, solar simulation software and solar contour calculators include machine program code for the solar hardware controller which are software programmed into Micro-controllers, Programmable Logic Controllers PLC, programmable gate arrays, Arduino processor or PIC processor. PC based solar tracking is also high in demand using C++, Visual Basic VB, as well as MS Windows, Linux and Apple Mac based operating systems for sun path tables on Matlab, Excel. Some books and internet webpages use other terms, such as: sun angle calculator, sun position calculator or solar angle calculator. As said, such software code calculate the solar azimuth angle, solar altitude angle, solar elevation angle or the solar Zenith angle (Zenith angle is simply referenced from vertical plane, the mirror of the elevation angle measured from the horizontal or ground plane level). Similar software code is also used in solar calculator apps or the solar power calculator apps for IOS and Android smartphone devices. Most of these smartphone solar mobile apps show the sun path and sun-angles for any location and date over a 24 hour period. Some smartphones include augmented reality features in which you can physically see and look at the solar path through your cell phone camera or mobile phone camera at your phone's specific GPS location. In the computer programming and digital signal processing (DSP) environment, (free/open source) program code are available for VB, .Net, Delphi, Python, C, C+, C++, PHP, Swift, ADM, F, Flash, Basic, QBasic, GBasic, KBasic, SIMPL language, Squirrel, Solaris, Assembly language on operating systems such as MS Windows, Apple Mac, DOS or Linux OS. Software algorithms predicting position of the sun in the sky are commonly available as graphical programming platforms such as Matlab (Mathworks), Simulink models, Java applets, TRNSYS simulations, Scada system apps, Labview module, Beckhoff TwinCAT (Visual Studio), Siemens SPA, mobile and iphone apps, Android or iOS tablet apps, and so forth. At the same time, PLC software code for a range of sun tracking automation technology can follow the profile of sun in sky for Siemens, HP, Panasonic, ABB, Allan Bradley, OMRON, SEW, Festo, Beckhoff, Rockwell, Schneider, Endress Hauser, Fudji electric, Honeywell, Fuchs, Yokonawa, or Muthibishi platforms. Sun path projection software are also available for a range of modular IPC embedded PC motherboard, Industrial PC, PLC (Programmable Logic Controller) and PAC (Programmable Automation Controller) such as the Siemens S7-1200 or Siemens Logo, Beckhoff IPC or CX series, OMRON PLC, Ercam PLC, AC500pic ABB, National Instruments NI PXI or NI cRIO, PIC processor, Intel 8051/8085, IBM (Cell, Power, Brain or Truenorth series), FPGA (Xilinx Altera Nios), Intel, Xeon, Atmel megaAVR, MPU, Maple, Teensy, MSP, XMOS, Xbee, ARM, Raspberry Pi, Eagle, Arduino or Arduino AtMega microcontroller, with servo motor, stepper motor, direct current DC pulse width modulation PWM (current driver) or alternating current AC SPS or IPC variable frequency drives VFD motor drives (also termed adjustable-frequency drive, variable-speed drive, AC drive, micro drive or inverter drive) for electrical, mechatronic, pneumatic, or hydraulic solar tracking actuators. The above motion control and robot control systems include analogue or digital interfacing ports on the processors to allow for tracker angle orientation feedback control through one or a combination of angle sensor or angle encoder, shaft encoder, precision encoder, optical encoder, magnetic encoder, direction encoder, rotational encoder, chip encoder, tilt sensor, inclination sensor, or pitch sensor. Note that the tracker's elevation or zenith axis angle may measured using an altitude angle-, declination angle-, inclination angle-, pitch angle-, or vertical angle-, zenith angle-sensor or inclinometer. Similarly the tracker's azimuth axis angle be measured with a azimuth angle-, horizontal angle-, or roll angle- sensor. Chip integrated accelerometer magnetometer gyroscope type angle sensors can also be used to calculate displacement. Other options include the use of thermal imaging systems such as a Fluke thermal imager, or robotic or vision based solar tracker systems that employ face tracking, head tracking, hand tracking, eye tracking and car tracking principles in solar tracking. With unattended decentralised rural, island, isolated, or autonomous off-grid power installations, remote control, monitoring, data acquisition, digital datalogging and online measurement and verification equipment becomes crucial. It assists the operator with supervisory control to monitor the efficiency of remote renewable energy resources and systems and provide valuable web-based feedback in terms of CO2 and clean development mechanism (CDM) reporting. A power quality analyser for diagnostics through internet, WiFi and cellular mobile links is most valuable in frontline troubleshooting and predictive maintenance, where quick diagnostic analysis is required to detect and prevent power quality issues. Solar tracker applications cover a wide spectrum of solar applications and solar assisted application, including concentrated solar power generation, solar desalination, solar water purification, solar steam generation, solar electricity generation, solar industrial process heat, solar thermal heat storage, solar food dryers, solar water pumping, hydrogen production from methane or producing hydrogen and oxygen from water (HHO) through electrolysis. Many patented or non-patented solar apparatus include tracking in solar apparatus for solar electric generator, solar desalinator, solar steam engine, solar ice maker, solar water purifier, solar cooling, solar refrigeration, USB solar charger, solar phone charging, portable solar charging tracker, solar coffee brewing, solar cooking or solar drying means. Your project may be the next breakthrough or patent, but your invention is held back by frustration in search for the sun tracker you require for your solar powered appliance, solar generator, solar tracker robot, solar freezer, solar cooker, solar drier, solar pump, solar freezer, or solar dryer project. Whether your solar electronic circuit diagram include a simplified solar controller design in a solar electricity project, solar power kit, solar hobby kit, solar steam generator, solar hot water system, solar ice maker, solar desalinator, hobbyist solar panels, hobby robot, or if you are developing professional or hobby electronics for a solar utility or micro scale solar powerplant for your own solar farm or solar farming, this publication may help accelerate the development of your solar tracking innovation. Lately, solar polygeneration, solar trigeneration (solar triple generation), and solar quad generation (adding delivery of steam, liquid/gaseous fuel, or capture food-grade CO₂) systems have need for automatic solar tracking. These systems are known for significant efficiency increases in energy yield as a result of the integration and re-use of waste or residual heat and are suitable for compact packaged micro solar powerplants that could be manufactured and transported in kit-form and operate on a plug-and play basis. Typical hybrid solar power systems include compact or packaged solar micro combined heat and power (CHP or mCHP) or solar micro combined, cooling, heating and power (CCHP, CHPC, mCCHP, or mCHPC) systems used in distributed power generation. These systems are often combined in concentrated solar CSP and CPV smart microgrid configurations for off-grid rural, island or isolated microgrid, minigrid and distributed power renewable energy systems. Solar tracking algorithms are also used in modelling of trigeneration systems using Matlab Simulink (Modelica or TRNSYS) platform as well as in automation and control of renewable energy systems through intelligent parsing, multi-objective, adaptive learning control and control optimization strategies. Solar tracking algorithms also find application in developing solar models for country or location specific solar studies, for example in terms of measuring or analysis of the fluctuations of the solar radiation (i.e. direct and diffuse radiation) in a particular area. Solar DNI, solar irradiance and atmospheric information and models can thus be integrated into a solar map, solar atlas or geographical information systems (GIS). Such models allows for defining local parameters for specific regions that may be valuable in terms of the evaluation of different solar in photovoltaic of CSP systems on simulation and synthesis platforms such as Matlab and Simulink or in linear or multi-objective optimization algorithm platforms such as COMPOSE, EnergyPLAN or DER-CAM. A dual-axis solar tracker and single-axis solar tracker may use a sun tracker program or sun tracker algorithm to position a solar dish, solar panel array, heliostat array, PV panel, solar antenna or infrared solar nantenna. A self-tracking solar concentrator performs automatic solar tracking by computing the solar vector. Solar position algorithms (TwinCAT, SPA, or PSA Algorithms) use an astronomical algorithm to calculate the position of the sun. It uses astronomical software algorithms and equations for solar tracking in the calculation of sun's position in the sky for each location on the earth at any time of day. Like an optical solar telescope, the solar position algorithm pin-points the solar reflector at the sun and locks onto the sun's position to track the sun across the sky as the sun progresses throughout the day. Optical sensors such as photodiodes, light-dependant-resistors (LDR) or photoresistors are used as optical accuracy feedback devices. Lately we also included a section in the book (with links to microprocessor code) on how the PixArt Wii infrared camera in the Wii remote or Wiimote may be used in infrared solar tracking applications. In order to harvest free energy from the sun, some automatic solar positioning systems use an optical means to direct the solar tracking device. These solar tracking strategies use optical tracking techniques, such as a sun sensor means, to direct sun rays onto a silicon or CMOS substrate to determine the X and Y coordinates of the sun's position. In a solar mems sun-sensor device, incident sunlight enters the sun sensor through a small pin-hole in a mask plate where light is exposed to a silicon substrate. In a web-camera or camera image processing sun tracking and sun following means, object tracking software performs multi object tracking or moving object tracking methods. In an solar object tracking technique, image processing software performs mathematical processing to box the outline of the apparent solar disc or sun blob within the captured image frame, while sun-localization is performed with an edge detection algorithm to determine the solar vector coordinates. An automated positioning system help maximize the yields of solar power plants through solar tracking control to harness sun's energy. In such renewable energy systems, the solar panel positioning system uses a sun tracking techniques and a solar angle calculator in positioning PV panels in photovoltaic systems and concentrated photovoltaic CPV systems. Automatic on-axis solar tracking in a PV solar tracking system can be dual-axis sun tracking or single-axis sun solar tracking. It is known that a motorized positioning system in a photovoltaic panel tracker increase energy yield and ensures increased power output, even in a single axis solar tracking configuration. Other applications such as robotic solar tracker or robotic solar tracking system uses robotica with artificial intelligence in the control optimization of energy yield in solar harvesting through a robotic tracking system. Automatic positioning systems in solar tracking designs are also used in other free energy generators, such as concentrated solar thermal power CSP and dish Stirling systems. The sun tracking device in a solar collector in a solar concentrator or solar collector Such a performs on-axis solar tracking, a dual axis solar tracker assists to harness energy from the sun through an optical solar collector, which can be a parabolic mirror, parabolic reflector, Fresnel lens or mirror array/matrix. A parabolic dish or reflector is dynamically steered using a transmission system or solar tracking slew drive mean. In steering the dish to face the sun, the power dish actuator and actuation means in a parabolic dish system optically focusses the sun's energy on the focal point of a parabolic dish or solar concentrating means. A Stirling engine, solar heat pipe, thermosyphin, solar phase change material PCM receiver, or a fibre optic sunlight receiver means is located at the focal point of the solar concentrator. The dish Stirling engine configuration is referred to as a dish Stirling system or Stirling power

generation system. Hybrid solar power systems (used in combination with biogas, biofuel, petrol, ethanol, diesel, natural gas or PNG) use a combination of power sources to harness and store solar energy in a storage medium. Any multitude of energy sources can be combined through the use of controllers and the energy stored in batteries, phase change material, thermal heat storage, and in cogeneration form converted to the required power using thermodynamic cycles (organic Rankin, Brayton cycle, micro turbine, Stirling) with an inverter and charge controller.

PRACTICAL SOLAR TRACKING AUTOMATIC SOLAR TRACKING SUN TRACKING АВТОМАТИЧЕСКОЕ УДЕРЖАНИЕ СОЛНЕЧНАЯ СЛЕЖЕНИЯ ВС □□□□□□□□□□

HIGH PRECISION SOLAR POSITION ALGORITHMS, PROGRAMS, SOFTWARE AND SOURCE-CODE FOR COMPUTING THE SOLAR VECTOR, SOLAR COORDINATES & SUN ANGLES IN MICROPROCESSOR, PLC, ARDUINO, PIC AND PC-BASED SUN TRACKING DEVICES OR DYNAMIC SUN FOLLOWING HARDWARE, PRÁTICO SOLAR RASTREO RASTREAMENTO, INSEGUIMENTO DEL SOLE, MOTORIZZATO INSEGUIMENTO SOLARE

Gerro Prinsloo This book details Practical Solar Energy Harvesting, Automatic Solar-Tracking, Sun-Tracking-Systems, Solar-Trackers and Sun Tracker Systems using motorized automatic positioning concepts and control principles. An intelligent automatic solar tracker is a device that orients a payload toward the sun. Such programmable computer based solar tracking device includes principles of solar tracking, solar tracking systems, as well as microcontroller, microprocessor and/or PC based solar tracking control to orientate solar reflectors, solar lenses, photovoltaic panels or other optical configurations towards the sun. Motorized space frames and kinematic systems ensure motion dynamics and employ drive technology and gearing principles to steer optical configurations such as mangin, parabolic, conic, or cassegrain solar energy collectors to face the sun and follow the sun movement contour continuously. In general, the book may benefit solar research and solar energy applications in countries such as Africa, Mediterranean, Italy, Spain, Greece, USA, Mexico, South America, Brazilia, Argentina, Chili, India, Malaysia, Middle East, UAE, Russia, Japan and China. This book on practical automatic Solar-Tracking Sun-Tracking is in .PDF format and can easily be converted to the .EPUB .MOBI .AZW .ePub .FB2 .LIT .LRF .MOBI .PDB .PDF .TCR formats for smartphones and Kindle by using the ebook.online-convert.com facility. The content of the book is also applicable to communication antenna satellite tracking and moon tracking algorithm source code for which links to free download links are provided. In harnessing power from the sun through a solar tracker or practical solar tracking system, renewable energy control automation systems require automatic solar tracking software and solar position algorithms to accomplish dynamic motion control with control automation architecture, circuit boards and hardware. On-axis sun tracking system such as the altitude-azimuth dual axis or multi-axis solar tracker systems use a sun tracking algorithm or ray tracing sensors or software to ensure the sun's passage through the sky is traced with high precision in automated solar tracker applications, right through summer solstice, solar equinox and winter solstice. A high precision sun position calculator or sun position algorithm is this an important step in the design and construction of an automatic solar tracking system. From sun tracing software perspective, the sonnet Tracing The Sun has a literal meaning. Within the context of sun track and trace, this book explains that the sun's daily path across the sky is directed by relatively simple principles, and if grasped/understood, then it is relatively easy to trace the sun with sun following software. Sun position computer software for tracing the sun are available as open source code, sources that is listed in this book. Ironically there was even a system called sun chaser, said to have been a solar positioner system known for chasing the sun throughout the day. Using solar equations in an electronic circuit for automatic solar tracking is quite simple, even if you are a novice, but mathematical solar equations are over complicated by academic experts and professors in text-books, journal articles and internet websites. 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Your project may be the next breakthrough or patent, but your invention is held back by frustration in search for the sun tracker you require for your solar powered appliance, solar generator, solar tracker robot, solar freezer, solar cooker, solar drier, solar pump, solar freezer, or solar dryer project. Whether your solar electronic circuit diagram include a simplified solar controller design in a solar electricity project, solar power kit, solar hobby kit, solar steam generator, solar hot water system, solar ice maker, solar desalinator, hobbyist solar panels, hobby robot, or if you are developing professional or hobby electronics for a solar utility or micro scale solar powerplant for your own solar farm or solar farming, this publication may help accelerate the development of your solar tracking innovation. 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In steering the dish to face the sun, the power dish actuator and actuation means in a parabolic dish system optically focusses the sun's energy on the focal point of a parabolic dish or solar concentrating means. A Stirling engine, solar heat pipe, thermosyphin, solar phase change material PCM receiver, or a fibre optic sunlight receiver means is located at the focal point of the solar concentrator. The dish Stirling engine configuration is referred to as a dish Stirling system or Stirling power generation system. Hybrid solar power systems (used in combination with biogas, biofuel, petrol, ethanol, diesel, natural gas or PNG) use a combination of power sources to harness and store solar energy in a storage medium. Any multitude of energy sources can be combined through the use of controllers and the energy stored in batteries, phase change material, thermal heat storage, and in cogeneration form converted to the required power using thermodynamic cycles (organic Rankin, Brayton cycle, micro turbine, Stirling) with an inverter and charge controller. В этой книге подробно Автоматическая Solar-Tracking, BC-Tracking-Systems, Solar-трекеры и BC Tracker Systems. Интеллектуальный автоматический солнечной слежения является устройством, которое ориентирует полезную нагрузку к солнцу. Такое программируемый компьютер на основе солнечной устройство слежения включает принципы солнечной слежения, солнечных систем слежения, а также микроконтроллер, микропроцессор и / или ПК на базе управления солнечной отслеживания ориентироваться солнечных отражателей, солнечные линзы, фотоэлектрические панели или другие оптические конфигурации к BC Моторизованные космические кадры и кинематические системы обеспечения динамики движения и использовать приводной техники и готовится принципы, чтобы направить оптические конфигурации, такие как Манжен, параболических, конических или Кассегрена солнечных коллекторов энергии, чтобы лицом к солнцу и следовать за солнцем контур движения непрерывно. В обуздывать силу от солнца через солнечный трекер или практической солнечной системы слежения, системы возобновляемых контроля энергии автоматизации требуют автоматического солнечной отслеживания программно обеспечения и алгоритмов солнечные позиции для достижения динамического контроля движения с архитектуры автоматизации управления, печатных плат и аппаратных средств. На оси системы слежения BC, таких как высота-азимут двойной оси или многоосевые солнечные системы трекер использовать алгоритм отслеживания солнце или трассировки лучей датчиков или программное обеспечение, чтобы обеспечить прохождение солнца по небу прослеживается с высокой точностью в автоматизированных приложений Солнечная Tracker , прямо через летнего солнцестояния, солнечного равноденствия и зимнего солнцестояния.Высокая точность позиции BC калькулятор или положение солнца алгоритм это важный шаг в проектировании и строительстве автоматической системой солнечной слежения. PC

RATIONAL APPLICATION DEVELOPER FOR WEBSHERE SOFTWARE V8 PROGRAMMING GUIDE

IBM Redbooks 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.

ENTERPRISE APPLICATION ARCHITECTURE WITH .NET CORE

Packt Publishing Ltd Architect and design highly scalable, robust, clean and highly performant applications in .NET Core About This Book Incorporate architectural soft-skills such as DevOps and Agile methodologies to enhance program-level objectives Gain knowledge of architectural approaches on the likes of SOA architecture and microservices to provide traceability and rationale for architectural decisions Explore a variety of practical use cases and code examples to implement the tools and techniques described in the book Who This Book Is For This book is for experienced .NET developers who are aspiring to become architects of enterprise-grade applications, as well as software architects who would like to leverage .NET to create effective blueprints of applications. What You Will Learn Grasp the important aspects and best practices of application lifecycle management Leverage the popular ALM tools, application insights, and their usage to monitor performance, testability, and optimization tools in an enterprise Explore various authentication models such as social media-based authentication, 2FA and OpenID Connect, learn authorization techniques Explore Azure with various solution approaches for Microservices and Serverless architecture along with Docker containers Gain knowledge about the recent market trends and practices and how they can be achieved with .NET Core and Microsoft tools and technologies In Detail If you want to design and develop enterprise applications using .NET Core as the development framework and learn about industry-wide best practices and guidelines, then this book is for you. The book starts with a brief introduction to enterprise architecture, which will help you to understand what enterprise architecture is and what the key components are. It will then teach you about the types of patterns and the principles of software development, and explain the various aspects of distributed computing to keep your applications effective and scalable. These chapters act as a catalyst to start the practical implementation, and design and develop applications using different architectural approaches, such as layered architecture, service oriented architecture, microservices and cloud-specific solutions. Gradually, you will learn about the different approaches and models of the Security framework and explore various authentication models and authorization techniques, such as social media-based authentication and safe storage using app secrets. By the end of the book, you will get to know the concepts and usage of the emerging fields, such as DevOps, BigData, architectural practices, and Artificial Intelligence. Style and approach Filled with examples and use cases, this guide takes a no-nonsense approach to show you the best tools and techniques required to become a successful software architect.

THE FULL STACK DEVELOPER

YOUR ESSENTIAL GUIDE TO THE EVERYDAY SKILLS EXPECTED OF A MODERN FULL STACK WEB DEVELOPER

Apress Understand the technical foundations, as well as the non-programming skills needed to be a successful full stack web developer. This book reveals the reasons why a truly successful full stack developer does more than write code. You will learn the principles of the topics needed to help a developer new to agile or full stack working—UX, project management, QA, product management, and more— all from the point of view of a developer. Covering these skills alongside the fundamentals and foundations of modern web development, rather than specifics of current technologies and frameworks (which can age quickly), all programming examples are given in the context of the web as it is in 2018. Although you need to feel comfortable working on code at the system, database, API, middleware or user interface level, depending on the task in hand, you also need to be able to deal with the big picture and the little details. The Full Stack Developer recognizes skills beyond the technical, and gives foundational knowledge of the wide set of skills needed in a modern software development team. What You'll Learn Plan your work including Agile vs Waterfall, tools, scrum, kanban and continuous delivery Translate UX into code: grids, component libraries and style guides Design systems and system architectures (microservices to monoliths) Review patterns for APIs (SOAP, AJAX, REST), defining API domains, patterns for REST APIs and more API goodness Study the various front-end design patterns you need to know Store data, what to consider for security, deployment, in production and more Who This Book Is For New graduates or junior developers who are transitioning to working as part of a larger team structure in a multi-disciplinary teams and developers previously focused on only front-end or back-end dev transitioning into full stack.

DATA MANAGEMENT AT SCALE

"O'Reilly Media, Inc." As data management and integration continue to evolve rapidly, storing all your data in one place, such as a data warehouse, is no longer scalable. In the very near future, data will need to be distributed and available for several technological solutions. With this practical book, you'll learn how to migrate your enterprise from a complex and tightly coupled data landscape to a more flexible architecture ready for the modern world of data consumption. Executives, data architects, analytics teams, and compliance and governance staff will learn how to build a modern scalable data landscape using the Scaled Architecture, which you can introduce incrementally without a large upfront investment. Author Piethein Strengtholt provides blueprints, principles, observations, best practices, and patterns to get you up to speed. Examine data management trends, including technological developments, regulatory requirements, and privacy concerns Go deep into the Scaled Architecture and learn how the pieces fit together Explore data governance and data security, master data management, self-service data marketplaces, and the importance of metadata

JBPM5 DEVELOPER GUIDE

Packt Publishing Ltd Approached from a developer's perspective, the "JBPM 5 Developer Guide" teaches readers all the essentials of Business Process Management through applicable examples with helpful screenshots and diagrams. This book is for Java developers and Java architects who need to have a deep understanding of how Business Process Management frameworks behave in real-life implementations. The book introduces you to the jBPM5 and Drools Community where you can contribute; providing ideas, adding code, fixing issues, or providing documentation and examples. The book assumes that you know the Java language well and also know some widely used frameworks, for example Hibernate and Log4J. You should also know the basics of relational databases and the Eclipse IDE.

JBoss AS 5 DEVELOPMENT

Packt Publishing Ltd Annotation JBoss AS is the most used Java application server on the market meeting high standards of reliability, efficiency, and robustness and is used to build powerful and secure Java EE applications. It supports the most important areas of Java Enterprise programming including EJB 3.0, dependency injection, web services, the security framework, and more. Getting started with

JBoss application server development can be challenging; however, with the right approach and guidance, you can easily master it and this book promises that. Written in an easy-to-read style, this book will take you from the basics of JBoss AS, such as installing core components and plug-ins, to the skills that will make you a JBoss developer to be reckoned with, covering advanced topics such as developing applications with JBoss Messaging service, JBoss web services, clustered applications, and more. You will learn the necessary steps to install a suitable environment for developing enterprise applications on JBoss AS. Then, your journey will continue through the heart of the application server, explaining how to customize each service for optimal usage. You will learn how to design Enterprise applications using Eclipse and JBoss plug-ins. You will then learn how to enable distributed communication using JMS. Storing and retrieving objects will be made easier using Hibernate. The core section of the book will take you into the programming arena with tested, real-world examples. The example programs have been carefully crafted to be easy to understand and useful as starting points for your applications. This book will kick-start your productivity and help you to master JBoss AS development. The author's experience with JBoss enables him to share insights on JBoss AS development, in a clear and friendly way. By the end of the book, you will have the confidence to apply all the newest programming techniques to your JBoss applications.

ENTERPRISE SERVICE BUS

"O'Reilly Media, Inc." Large IT organizations increasingly face the challenge of integrating various web services, applications, and other technologies into a single network. The solution to finding a meaningful large-scale architecture that is capable of spanning a global enterprise appears to have been met in ESB, or Enterprise Service Bus. Rather than conform to the hub-and-spoke architecture of traditional enterprise application integration products, ESB provides a highly distributed approach to integration, with unique capabilities that allow individual departments or business units to build out their integration projects in incremental, digestible chunks, maintaining their own local control and autonomy, while still being able to connect together each integration project into a larger, more global integration fabric, or grid. Enterprise Service Bus offers a thorough introduction and overview for systems architects, system integrators, technical project leads, and CTO/CIO level managers who need to understand, assess, and evaluate this new approach. Written by Dave Chappell, one of the best known and authoritative voices in the field of enterprise middleware and standards-based integration, the book drills down into the technical details of the major components of ESB, showing how it can utilize an event-driven SOA to bring a variety of enterprise applications and services built on J2EE, .NET, C/C++, and other legacy environments into the reach of the everyday IT professional. With Enterprise Service Bus, readers become well versed in the problems faced by IT organizations today, gaining an understanding of how current technology deficiencies impact business issues. Through the study of real-world use cases and integration patterns drawn from several industries using ESB--including Telcos, financial services, retail, B2B exchanges, energy, manufacturing, and more--the book clearly and coherently outlines the benefits of moving toward this integration strategy. The book also compares ESB to other integration architectures, contrasting their inherent strengths and limitations. If you are charged with understanding, assessing, or implementing an integration architecture, Enterprise Service Bus will provide the straightforward information you need to draw your conclusions about this important disruptive technology.

SOA WITH .NET AND WINDOWS AZURE

REALIZING SERVICE-ORIENTATION WITH THE MICROSOFT PLATFORM

Pearson Education The Authoritative Guide to Building Service-Oriented Solutions with Microsoft .NET Technologies and the Windows Azure Cloud Computing Platform In SOA with .NET and Windows Azure, top Microsoft technology experts team up with Thomas Erl to explore service-oriented computing with Microsoft's latest .NET service technologies and Windows Azure innovations. The authors provide comprehensive documentation of on-premise and cloud-based modern service technology advancements within the Microsoft platform and further show how these technologies have increased the potential for applying and realizing service-orientation practices and goals. Specifically, the book delves into Microsoft enterprise technologies, such as: Windows Communication Foundation (WCF) Windows Azure Windows Workflow Foundation (WF) Windows Azure AppFabric BizTalk Server Windows Presentation Foundation (WPF) ...as well as industry service mediums, including WS-* and REST, and many related service industry standards and technologies. The book steps through common SOA design patterns and service-orientation principles, along with numerous code-level examples that further detail various technology architectures and implementations. Topic Areas This book covers the following primary topics: Microsoft Service Technologies Microsoft Enterprise Technologies On-Premise & Cloud-Based Service Topics Industry Service Technologies & Mediums Service-Oriented Technology Architectural Models Service-Orientation Design Paradigm Service-Orientation Design Principles SOA Design Patterns About the Web Sites This book series is further supported by a series of resources sites, including: www.soabooks.com www.soaspecs.com www.soamag.com www.serviceorientation.com www.soapatterns.org www.soapprinciples.com www.whatissoa.com

RELEASE IT!

DESIGN AND DEPLOY PRODUCTION-READY SOFTWARE

Pragmatic Bookshelf A single dramatic software failure can cost a company millions of dollars - but can be avoided with simple changes to design and architecture. This new edition of the best-selling industry standard shows you how to create systems that run longer, with fewer failures, and recover better when bad things happen. New coverage includes DevOps, microservices, and cloud-native architecture. Stability antipatterns have grown to include systemic problems in large-scale systems. This is a must-have pragmatic guide to engineering for production systems. If you're a software developer, and you don't want to get alerts every night for the rest of your life, help is here. With a combination of case studies about huge losses - lost revenue, lost reputation, lost time, lost opportunity - and practical, down-to-earth advice that was all gained through painful experience, this book helps you avoid the pitfalls that cost companies millions of dollars in downtime and reputation. Eighty percent of project life-cycle cost is in production, yet few books address this topic. This updated edition deals with the production of today's systems - larger, more complex, and heavily virtualized - and includes information on chaos engineering, the discipline of applying randomness and deliberate stress to reveal systematic problems. Build systems that survive the real world, avoid downtime, implement zero-downtime upgrades and continuous delivery, and make cloud-native applications resilient. Examine ways to architect, design, and build software - particularly distributed systems - that stands up to the typhoon winds of a flash mob, a Slashdotting, or a link on Reddit. Take a hard look at software that failed the test and find ways to make sure your software survives. To skip the pain and get the experience...get this book.

ENTERPRISE API MANAGEMENT

CLOUD COMPUTING BIBLE

John Wiley & Sons The complete reference guide to the hot technology of cloud computing Its potential for lowering IT costs makes cloud computing a major force for both IT vendors and users; it is expected to gain momentum rapidly with the launch of Office Web Apps later this year. Because cloud computing involves various technologies, protocols, platforms, and infrastructure elements, this comprehensive reference is just what you need if you'll be using or implementing cloud computing. Cloud computing offers significant cost savings by eliminating upfront expenses for hardware and software; its growing popularity is expected to skyrocket when Microsoft introduces Office Web Apps This comprehensive guide helps define what cloud computing is and thoroughly explores the technologies, protocols, platforms and infrastructure that make it so desirable Covers mobile cloud computing, a significant area due to ever-increasing cell phone and smartphone use Focuses on the platforms and technologies essential to cloud computing Anyone involved with planning, implementing, using, or maintaining a cloud computing project will rely on the information in Cloud Computing Bible.

ORACLE E-BUSINESS SUITE R12 INTEGRATION AND OA FRAMEWORK DEVELOPMENT AND EXTENSION COOKBOOK

Packt Publishing Ltd Oracle E-Business Suite R12 Integration and OA Framework Development and Extension Cookbook.

PRACTICAL ORACLE CLOUD INFRASTRUCTURE

INFRASTRUCTURE AS A SERVICE, AUTONOMOUS DATABASE, MANAGED KUBERNETES, AND SERVERLESS

Apress Use this fast-paced and comprehensive guide to build cloud-based solutions on Oracle Cloud Infrastructure. You will understand cloud infrastructure, and learn how to launch new applications and move existing applications to Oracle Cloud. Emerging trends in software architecture are covered such as autonomous platforms, infrastructure as code, containerized applications, cloud-based container orchestration with managed Kubernetes, and running serverless workloads using open-source tools. Practical examples are provided. This book teaches you how to self-provision the cloud resources you require to run and scale your custom cloud-based applications using a convenient web console and programmable APIs, and you will learn how to manage your infrastructure as code with Terraform. You will be able to plan, design, implement, deploy, run, and monitor your production-grade and fault-tolerant cloud software solutions in Oracle's data centers across the world, paying only for the resources you actually use. Oracle Cloud Infrastructure is part of Oracle's new generation cloud that delivers a complete and well-integrated set of Infrastructure as a Service (IaaS) capabilities (compute, storage, networking), edge services (DNS, web application firewall), and Platform as a Service (PaaS) capabilities (such as Oracle Autonomous Database which supports both transactional and analytical workloads, the certified and fully managed Oracle Kubernetes Engine, and a serverless platform based on an open-source Fn Project). What You Will Learn Build software solutions on Oracle Cloud Automate cloud infrastructure with CLI and Terraform Follow best practices for architecting on Oracle Cloud Employ Oracle Autonomous Database to obtain valuable data insights Run containerized applications on Oracle's Container Engine for Kubernetes Understand the emerging Cloud Native ecosystem Who This Book Is For Cloud architects, developers, DevOps engineers, and technology students and others who want to learn how to build cloud-based systems on Oracle Cloud Infrastructure (OCI) leveraging a broad range of OCI Infrastructure as a Service (IaaS) capabilities, Oracle Autonomous Database, and Oracle's Container Engine for Kubernetes. Readers should have a working knowledge of Linux, exposure to programming, and a basic understanding of networking concepts. All exercises in the book can be done at no cost with a 30-day Oracle Cloud trial.