

The Art Of Software Support Design And Operation Of Support Centers And Help Desks

Information is considered both an essential element of organizational design and an asset to be processed and managed. Further research on and application of topics relating to the architecture, management, and use of information is imperative to organizational success. The Handbook of Research on Information Architecture and Management in Modern Organizations focuses on information as an essential element of organizational design and emphasizes the strategic role of knowledge transfer and management in organizations across industries. Taking a cross-disciplinary approach to information architecture and management, this publication draws on research essential to diverse organizations and is designed for use by business professionals, researchers, academicians, and upper-level students. This comprehensive reference work features key research and concepts on topics related to information functionality, information modeling, information overload, information retrieval, innovation management, organizational architecture, informed governance, and relevant applications across industries. Answering questions about software and hardware is a full-time job for hundreds of thousands of people. IBM alone has over 20,000 full-time technical support personnel. This is a book about and for the technical support industry. It describes how to set up and manage

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

a technical support operation, covers techniques for handling support questions by phone, and explains how to estimate the cost of a technical support operation. The book includes profiles of successful technical support operations at companies such as WordPerfect Corporation.

This innovative book uncovers all the steps readers should follow in order to build successful software and systems. With the help of numerous examples, Albin clearly shows how to incorporate Java, XML, SOAP, ebXML, and BizTalk when designing true distributed business systems. Teaches how to easily integrate design patterns into software design. Documents all architectures in UML and presents code in either Java or C++.

Structuring, or, as it is referred to in the title of this book, the art of structuring, is one of the core elements in the discipline of Information Systems. While the world is becoming increasingly complex, and a growing number of disciplines are evolving to help make it a better place, structure is what is needed in order to understand and combine the various perspectives and approaches involved. Structure is the essential component that allows us to bridge the gaps between these different worlds, and offers a medium for communication and exchange. The contributions in this book build these bridges, which are vital in order to communicate between different worlds of thought and methodology – be it between Information Systems (IS) research and practice, or between IS research and other research disciplines. They describe how structuring can be and should be

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

done so as to foster communication and collaboration.

The topics covered reflect various layers of structure that can serve as bridges: models, processes, data, organizations, and technologies. In turn, these aspects are complemented by visionary outlooks on how structure influences the field.

The complex and multidisciplinary nature of environmental problems requires that they are dealt with in an integrated manner. Modeling and software have become key instruments used to promote sustainability and improve environmental decision processes, especially through systematic integration of various knowledge and data and their ability to foster learning and help make predictions. This book presents the current state-of-the-art in environmental modeling and software and identifies the future challenges in the field. State-of-the-art in environmental modeling and software theory and practice for integrated assessment and management serves as a starting point for researchers. Identifies the areas of research and practice required for advancing the requisite knowledge base and tools, and their wider usage. Best practices of environmental modeling enables the reader to select appropriate software and gives the reader tools to integrate natural system dynamics with human dimensions.

For more than 40 years, Computerworld has been the leading source of technology news and information for IT influencers worldwide. Computerworld's award-winning Web site (Computerworld.com), twice-monthly publication, focused conference series and custom research form the hub of the world's largest global IT

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

media network.

This book introduces Software Thermal Management (STM) as a means of reducing power consumption in a computing system in order to manage heat, improve component reliability and increase system safety. Readers will benefit from this pragmatic guide to the field of STM for embedded systems and its catalog of software power management techniques. Since thermal management is a key bottleneck in embedded systems design, this book focuses on root cause of heat in embedded systems: power. Since software has an enormous impact on power consumption in an embedded system, this book urges software engineers to manage heat effectively by understanding, categorizing and developing new ways to reduce static and dynamic power consumption. Whereas most books on thermal management describe mechanisms to remove heat, this book focuses on ways for software engineers to avoid generating heat in the first place. The four-volume set LNCS 6946-6949 constitutes the refereed proceedings of the 13th IFIP TC13 International Conference on Human-Computer Interaction, INTERACT 2011, held in Lisbon, Portugal, in September 2011. The fourth volume includes 27 regular papers organized in topical sections on usable privacy and security, user experience, user modelling, visualization, and Web interaction, 5 demo papers, 17 doctoral consortium papers, 4 industrial papers, 54 interactive posters, 5 organization overviews, 2 panels, 3 contributions on special interest groups, 11 tutorials, and 16 workshop papers.

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

The Definitive Insider's Guide to Auditing Software Security

This is one of the most detailed, sophisticated, and useful guides to software security auditing ever written. The authors are leading security consultants and researchers who have personally uncovered vulnerabilities in applications ranging from sendmail to Microsoft Exchange, Check Point VPN to Internet Explorer. Drawing on their extraordinary experience, they introduce a start-to-finish methodology for "ripping apart" applications to reveal even the most subtle and well-hidden security flaws. The Art of Software Security Assessment covers the full spectrum of software vulnerabilities in both UNIX/Linux and Windows environments. It demonstrates how to audit security in applications of all sizes and functions, including network and Web software. Moreover, it teaches using extensive examples of real code drawn from past flaws in many of the industry's highest-profile applications. Coverage includes • Code auditing: theory, practice, proven methodologies, and secrets of the trade • Bridging the gap between secure software design and post-implementation review • Performing architectural assessment: design review, threat modeling, and operational review • Identifying vulnerabilities related to memory management, data types, and malformed data • UNIX/Linux assessment: privileges, files, and processes • Windows-specific issues, including objects and the filesystem • Auditing interprocess communication, synchronization, and state • Evaluating network software: IP stacks, firewalls, and common application protocols • Auditing Web applications and technologies

Today's architecting must handle systems of types unknown until very recently. New domains, including personal computers, intersatellite networks, health services, and joint service command and control are calling for new architectures-and for architects specializing in those domains.

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

Since the original publication, of this bestselling text, these This book constitutes the refereed proceedings of the 7th International Conference on Product-Focused Software Process Improvement, PROFES 2006, held in Amsterdam, June 2006. The volume presents 26 revised full papers and 12 revised short papers together with 6 reports on workshops and tutorials. The papers constitute a balanced mix of academic and industrial aspects, organized in topical sections on decision support, embedded software and system development, measurement, process improvement, and more.

The classic, landmark work on software testing The hardware and software of computing have changed markedly in the three decades since the first edition of The Art of Software Testing, but this book's powerful underlying analysis has stood the test of time. Whereas most books on software testing target particular development techniques, languages, or testing methods, The Art of Software Testing, Third Edition provides a brief but powerful and comprehensive presentation of time-proven software testing approaches. If your software development project is mission critical, this book is an investment that will pay for itself with the first bug you find.

The new Third Edition explains how to apply the book's classic principles to today's hot topics including: Testing apps for iPhones, iPads, BlackBerrys, Androids, and other mobile devices Collaborative (user) programming and testing Testing for Internet applications, e-commerce, and agile programming environments Whether you're a student looking for a testing guide you'll use for the rest of your career, or an IT manager overseeing a software development team, The Art of Software Testing, Third Edition is an expensive book that will pay for itself many times over.

Imagine that you are the CEO of a software company. You know you compete in an environment that does not permit

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

you to treat innovation as a secondary issue. But how should you manage your software innovation to get the most out of it? This book will provide you with the answer. Software innovation is multifaceted and the approaches used by companies can be very different. The team of authors that wrote this book took the assumption that there is no such thing as a universal software engineering process or innovation process. Some things work well for a certain company, others do not. The book is organized around what the authors call eight fundamental practice areas for innovation with software. Each practice area contains a number of activities that can help companies to master that practice area. It also contains industrial experience reports that illustrate the applicability of these practice areas in software companies and is structured in such a way that you can select and read only those practice areas that are relevant to your company. The book is written with an industrial target audience in mind. Its most important goal is to challenge companies by offering them a framework to become more innovation-driven, rather than engineering-driven. Intrigued? Here you will find details of what you and your company can do to understand, implement, and sustain continuous innovation.

The Art and Science of Analyzing Software Data provides valuable information on analysis techniques often used to derive insight from software data. This book shares best practices in the field generated by leading data scientists, collected from their experience training software engineering students and practitioners to master data science. The book covers topics such as the analysis of security data, code reviews, app stores, log files, and user telemetry, among others. It covers a wide variety of techniques such as co-change analysis, text analysis, topic analysis, and concept analysis, as well as advanced topics such as release planning

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

and generation of source code comments. It includes stories from the trenches from expert data scientists illustrating how to apply data analysis in industry and open source, present results to stakeholders, and drive decisions. Presents best practices, hints, and tips to analyze data and apply tools in data science projects Presents research methods and case studies that have emerged over the past few years to further understanding of software data Shares stories from the trenches of successful data science initiatives in industry
The Art of SupportLulu.com

The Art of Great Training Delivery is designed to help trainers move their training and facilitation skills to the next level of performance. Written by Jean Barbazette--an expert in the field of training and development--this vital resource is filled with down-to-earth advice and illustrative examples for selecting and using a variety of training methods. Her advice helps trainers create the best learning experience that will improve learner retention. The book covers a wealth of topics including how to use case studies, conduct inventories, exercises, games, and simulations, facilitate role plays, as well as conduct effective and safe demonstrations and administer tests. The Art of Great Training Delivery is a volume in The Skilled Trainer series. Praise for The Art of Great Training Delivery "What a gift to the training profession! Once again Jean has packaged valuable tips, tools, and techniques to make every trainer's life easier and more complete. From setting a learning climate to administering tests; selecting an icebreaker to completing follow-up; how to facilitate case studies and role plays; enhancing your training style--it's all here! Add a CD for good measure and you have a bundle of brilliant basics--you'll wonder how you ever lived without them!" --Elaine Biech, ebb associates inc, author, Training for Dummies and The Business of Consulting "The Art of Great Training Delivery is a complete guide for training

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

success. Jean not only covers all the bases but provides nuggets of training wisdom that will last an entire career. An invaluable resource for new and veteran trainers!" --Mel Silberman, Ph.D., author, *Training the Active Training Way* and *Active Training* "Perfect for anyone who wants a detailed, analytical approach to training--with enough tools and examples to make the concepts applicable to any training program. Written for both the new as well as experienced trainer, there is something for everyone in this thoroughly documented and researched book." --Sharon Bowman, author, *The Ten-Minute Trainer*

Software legend Capers Jones reveals the tight links between software quality, ROI, and TCO, and help you optimize all three ••Strong empirical evidence that high quality generates strongly positive ROI and reduced TCO. •Practical ways to prevent defects, and remove them in pre-test, test, and postrelease. •Easy checklists for assessing and improving practice, plus insights into the costs/benefits of intervention. •By renowned software consultant Capers Jones. In this book, world-renowned software management expert Capers Jones and software quality guru Jitendra Subramanyam help development leaders and practitioners quantify and optimize the economic impact of quality throughout the software lifecycle - and then choose the highest value interventions to improve it. The authors introduce powerful empirical and field data on the ability of inspection, static analysis, and test methods to reduce up to 95% of defects, and discuss the

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

business value of improvements of this magnitude.

The Economics of Software Quality is based on proven best quality practices in IT departments and at world-leading integrators, embedded software companies, and systems software groups. Jones and Curtis bring together crucial new information on:

- Identifying and fixing the root causes of short- and long-term software cost inefficiencies.
- Predicting and measuring software defects and their quality impacts.
- Assessing current practices and identifying the best interventions.
- Calculating the ROI of quality during development and maintenance.
- Comparing and choosing methods of defect prevention.
- Selecting methods of defect removal, such as inspections and static analysis.
- Understanding and evaluating more than 20 kinds of software testing.
- Best practices for postrelease defect reporting and repair.
- Recognizing 'hazardous' metrics and their problems

Business process reengineering is arguably the management paradigm of the decade. No other paradigm for organizational innovation and improvement has achieved a stronger presence and impact in corporate boardrooms around the world. In recent years reengineering has also moved away from the hype into real-world application, and there is now a vast pool of techniques and experience ready to be tapped by organizational-change advocates. This book provides an international

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

showcase of reengineering in action, with contributions from more than forty experts spanning five continents. Besides prescriptions of concepts and tools, it presents case studies of public sector as well as private sector reengineering experience, and visions of the future of reengineering practice.

Contents: Introduction: Reengineering for World-Class Excellence
Concepts and Tools: Workflow Management Technology
The RARE System
Integrated Business Process Management
BPR-Enabled Systems Engineering
Supply Chain Management
Reference Process Building Blocks
Diagnosing Process Design
Unit of Analysis
Electronic Commerce
Object-Oriented Models
Public Sector Experience: Singapore's Public Sector
US Department of Defense
Extensions of IDEF Methodology
Civil Services in Taiwan
Customer Participation and Commitment
Yin-Yang Balanced Approach
Private Sector Experience: IT Dimensions and Interdependencies
HR Development Systems
End-User Support
BPR in India
Textile Manufacturing
A Scientific Approach
Future Prospects: Managing Risks
Into the 3rd Millennium
Readership: CEOs, CIOs, COOs, IS managers, HR managers, management consultants, industrial engineers and educators.

If engineering is the art and science of technical problem solving, systems architecting happens when

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

you don't yet know what the problem is. The third edition of a highly respected bestseller, *The Art of Systems Architecting* provides in-depth coverage of the least understood part of systems design: moving from a vague concept and limited resources to a satisfactory and feasible system concept and an executable program. The book provides a practical, heuristic approach to the "art" of systems architecting. It provides methods for embracing, and then taming, the growing complexity of modern systems. New in the Third Edition: Five major case studies illustrating successful and unsuccessful practices Information on architecture frameworks as standards for architecture descriptions New methods for integrating business strategy and architecture and the role of architecture as the technical embodiment of strategy Integration of process guidance for organizing and managing architecture projects Updates to the rapidly changing fields of software and systems-of-systems architecture Organization of heuristics around a simple and practical process model A Practical Heuristic Approach to the Art of Systems Architecting Extensively rewritten to reflect the latest developments, the text explains how to create a system from scratch, presenting invention/design rules together with clear explanations of how to use them. The author supplies practical guidelines for avoiding common systematic failures while

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

implementing new mandates. He uses a heuristics-based approach that provides an organized attack on very ill-structured engineering problems.

Examining architecture as more than a set of diagrams and documents, but as a set of decisions that either drive a system to success or doom it to failure, the book provide methods for integrating business strategy with technical architectural decision making.

The Art of Agile Practice: A Composite Approach for Projects and Organizations presents a consistent, integrated, and strategic approach to achieving "Agility" in your business. Transcending beyond Agile as a software development method, it covers the gamut of methods in an organization-including business processes, governance standards, project ma

Modeling complex systems is a difficult challenge and all too often one in which modelers are left to their own devices. Using a multidisciplinary approach, The Art of Software Modeling covers theory, practice, and presentation in detail. It focuses on the importance of model creation and demonstrates how to create meaningful models. Presenting three self-contained sections, the text examines the background of modeling and frameworks for organizing information. It identifies techniques for researching and capturing client and system information and addresses the challenges of

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

presenting models to specific audiences. Using concepts from art theory and aesthetics, this broad-based approach encompasses software practices, cognitive science, and information presentation. The book also looks at perception and cognition of diagrams, view composition, color theory, and presentation techniques. Providing practical methods for investigating and organizing complex information, *The Art of Software Modeling* demonstrates the effective use of modeling techniques to improve the development process and establish a functional, useful, and maintainable software system.

Dispelling much of the folklore surrounding software maintenance, *Software Maintenance Success Recipes* identifies actionable formulas for success based on in-depth analysis of more than 200 real-world maintenance projects. It details the set of factors that are usually present when effective software maintenance teams do their work and instructs on

As a companion to the textbook *Profit from software ecosystems*" this book presents additional literature and work tasks for students and academic researchers. Many tasks in this workbook are taken from real business in the software industry.

Practitioners in the software industry use this book to stay up to date while solving the mind teasers in this book. Please visit www.synomic.com/partnerbook for more information.

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

Presents ready-to-use information on how to set up and effectively run a help desk or technical software support group. The manual provides check lists for call handling and resolving calls, determining staffing levels and cost-justifying a support center

When you're a Frontier Corps Ranger in Sector 12 there's always plenty of work that needs to be done. In your role as soldier there are paramilitary groups to fight and alien agencies to fend off. As a scout and spy you need to stay alert for signs of attacks on human space. As an operative you must do whatever you can to persuade the alien governments of The Other Side to leave Frontier Corps alone. Fortunately Rev (sometimes called Red, Rubicon, Rab and other names he doesn't care to repeat,) is good at multi-tasking. Especially because he has an additional duty- a secret mission from Frontier Corps. Recent events on the planet Acan have given him a potential lead, and he's determined not to let the trail slip away this time. He will need that kind of focus, because there's a new player in Sector 12, an anti-Ranger paramilitary group with powerful backers. They've just finished devastating the Rangers in Sector 13 and now they're looking for fresh victims and new victories.

A Comprehensive, Proven Approach to IT Scalability from Two Veteran Software, Technology, and Business Executives In The Art of Scalability, AKF Partners cofounders Martin L. Abbott and Michael T. Fisher cover everything IT and business leaders must know to build technology infrastructures that can scale smoothly to meet any business requirement. Drawing on their unparalleled experience managing some of the world's highest-transaction-volume Web sites, the authors provide detailed models and best-practice approaches available in no other book. Unlike previous books on scalability, The Art of Scalability doesn't

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

limit its coverage to technology. Writing for both technical and nontechnical decision-makers, this book covers everything that impacts scalability, including architecture, processes, people, and organizations. Throughout, the authors address a broad spectrum of real-world challenges, from performance testing to IT governance. Using their tools and guidance, organizations can systematically overcome obstacles to scalability and achieve unprecedented levels of technical and business performance. Coverage includes Staffing the scalable organization: essential organizational, management, and leadership skills for technical leaders Building processes for scale: process lessons from hyper-growth companies, from technical issue resolution to crisis management Making better “build versus buy” decisions Architecting scalable solutions: powerful proprietary models for identifying scalability needs and choosing the best approaches to meet them Optimizing performance through caching, application and database splitting, and asynchronous design Scalability techniques for emerging technologies, including clouds and grids Planning for rapid data growth and new data centers Evolving monitoring strategies to tightly align with customer requirements

Are you a customer success or support executive curious about adapting industry best practices to your organization? Are you a newly-promoted customer success or support manager with plenty of ideas, but not much management experience? Or are you an executive with no hands-on experience with customer success, but wanting to learn more about how to decrease churn and improve revenue expansion from existing customers? The Art of Support is a practical guide for managers and executives that answers your questions. In it, you will find: - Best practices for customer success and support, from designing customer lifecycle journeys, to managing day-to-day activities, to

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

measuring results. - Nuanced recommendations to build or improve your organization. - Dozens of practical tools you can use right away such as customer scorecards, sample support portfolios, hiring checklists, decision trees for selecting support models, job ladders, and budget templates.

This succinct book explains how you can apply the practices of Lean software development to dramatically increase productivity and quality. Based on techniques that revolutionized Japanese manufacturing, Lean principles are being applied successfully to product design, engineering, the supply chain, and now software development. With *The Art of Lean Software Development*, you'll learn how to adopt Lean practices one at a time rather than taking on the entire methodology at once. As you master each practice, you'll see significant, measurable results. With this book, you will:

- Understand Lean's origins from Japanese industries and how it applies to software development
- Learn the Lean software development principles and the five most important practices in detail
- Distinguish between the Lean and Agile methodologies and understand their similarities and differences
- Determine which Lean principles you should adopt first, and how you can gradually incorporate more of the methodology into your process
- Review hands-on practices, including descriptions, benefits, trade-offs, and roadblocks
- Learn how to sell these principles to management

The Art of Lean Software Development is ideal for busy people who want to improve the development process but can't afford the disruption of a sudden and complete transformation. The Lean approach has been yielding dramatic results for decades, and with this book, you can make incremental changes that will produce immediate benefits. "This book presents Lean practices in a clear and concise manner so readers are motivated to make their software more reliable and less costly to maintain. I

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

recommend it to anyone looking for an easy-to-follow guide to transform how the developer views the process of writing good software."-- Bryan Wells, Boeing Intelligence & Security Systems Mission System "If you're new to Lean software development and you're not quite sure where to start, this book will help get your development process going in the right direction, one step at a time."-- John McClenning, software development lead, Aclara

Presents patterns for the Deliver and the Maintain and Support phases of large-scale system development.

1. 1 The Pressure on Information Technology (IT) "In today's environment, the ability to react quickly to change by reducing the development life cycle in order to be first to market will give a company an important competitive edge. " -James Martin The market conditions of the 21 st century put business under continual pressure. The most successful companies are those who are able to reduce their time to market, to launch initiatives before their competitors, to respond very rapidly to opportunities in the marketplace or to change direction in response to a move by the competition or a change in circumstances. All of these business initiatives rely on support from Information Technology (IT). For a business to launch a new product in three months time, the supporting IT processes must be available and working in that three month time frame. In this fast moving environment, late IT delivery is not acceptable and may pose a major risk to the business. The marketplace of 21 st century business measures timescales in months, whereas in the past, timescales of two to three years were more typical. Internet related and e business projects frequently require even tighter timescales, measured in days rather than months. This need for speed puts tremendous pressure on IT departments. Pressure does not just come from the need for speed. There is also an ever-increasing rate of change within business.

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

Ever wonder how software is written? Thinking about trying your hand at creating an app? Want to make a career of it? "The Art And Science Of Software Development", written by an industry veteran and a graduate of one of America's best universities in the field of information technology, shares his thoughts and insights in a non-technical, approachable text. This book constitutes the refereed post-conference proceedings of the 15th IFIP WG 5.1 International Conference on Product Lifecycle Management, PLM 2018, held in Turin, Spain, in July 2018. The 72 revised full papers presented were carefully reviewed and selected from 82 submissions. The papers are organized in the following topical sections: building information modeling; collaborative environments and new product development; PLM for digital factories and cyber physical systems; ontologies and data models; education in the field of industry 4.0; product-service systems and smart products; lean organization for industry 4.0; knowledge management and information sharing; PLM infrastructure and implementation; PLM maturity, implementation and adoption; 3D printing and additive manufacturing; and modular design and products and configuration and change management.

For over 20 years, *Software Engineering: A Practitioner's Approach* has been the best selling guide to software engineering for students and industry professionals alike. The sixth edition continues to lead the way in software engineering. A new Part 4 on Web Engineering presents a complete engineering approach for the analysis, design, and testing of Web Applications, increasingly important for today's students. Additionally, the UML coverage has been enhanced and significantly increased in this

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

new edition. The pedagogy has also been improved in the new edition to include sidebars. They provide information on relevant software tools, specific workflow for specific kinds of projects, and additional information on various topics. Additionally, Pressman provides a running case study called "Safe Home" throughout the book, which provides the application of software engineering to an industry project. New additions to the book also include chapters on the Agile Process Models, Requirements Engineering, and Design Engineering. The book has been completely updated and contains hundreds of new references to software tools that address all important topics in the book. The ancillary material for the book includes an expansion of the case study, which illustrates it with UML diagrams. The On-Line Learning Center includes resources for both instructors and students such as checklists, 700 categorized web references, Powerpoints, a test bank, and a software engineering library-containing over 500 software engineering papers. TAKEAWY HERE IS THE FOLLOWING: 1. AGILE PROCESS METHODS ARE COVERED EARLY IN CH. 42. NEW PART ON WEB APPLICATIONS --5 CHAPTERS

This book delivers in-depth, up-to-date, battle tested techniques for anticipating and identifying software security problems before the "bad guys" do.--[book cover].

Download File PDF The Art Of Software Support Design And Operation Of Support Centers And Help Desks

This book focuses on the core question of the necessary architectural support provided by hardware to efficiently run virtual machines, and of the corresponding design of the hypervisors that run them. Virtualization is still possible when the instruction set architecture lacks such support, but the hypervisor remains more complex and must rely on additional techniques. Despite the focus on architectural support in current architectures, some historical perspective is necessary to appropriately frame the problem. The first half of the book provides the historical perspective of the theoretical framework developed four decades ago by Popek and Goldberg. It also describes earlier systems that enabled virtualization despite the lack of architectural support in hardware. As is often the case, theory defines a necessary—but not sufficient—set of features, and modern architectures are the result of the combination of the theoretical framework with insights derived from practical systems. The second half of the book describes state-of-the-art support for virtualization in both x86-64 and ARM processors. This book includes an in-depth description of the CPU, memory, and I/O virtualization of these two processor architectures, as well as case studies on the Linux/KVM, VMware, and Xen hypervisors. It concludes with a performance comparison of virtualization on current-generation x86- and ARM-based systems across multiple hypervisors.

