Capacity Planning For Web Services Metrics Models And Methods

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An Executive's Guide to Information Technology - Robert Plant 2007-05-17
Assessing the most valuable technology for an organization is becoming a growing challenge for business professionals confronted with an expanding array of options. This 2007 book is an A-Z compendium of technological terms written for the non-technical executive, allowing quick identification of what the term is and why it is significant. This is more than a dictionary - it is a concise review of the most important aspects of information technology from a business perspective: the major advantages, disadvantages and business value propositions of each term are discussed, as well as sources for further reading, and cross-referencing with other terms where applicable. The essential elements of each concept are covered in a succinct manner so the reader can quickly obtain the required knowledge without wading through exhaustive descriptions. With over 200 terms, this is a valuable reference for non- and semi-technical managers, executives and graduate students in business and technology management.
Service-Oriented Computing - ICSOC 2007 Workshops - Elisabetta Di Nitto 2009-01-20
This book constitutes the thoroughly refereed papers presented at five international workshops held in conjunction with the 5th International Conference on Service-Oriented Computing, ICSOC 2007, in Vienna, Austria, in September 2007. The five workshops were selected out of eight submissions. The volume contains papers presented at the First International Workshop on Web APIs and Services Mashups (Mashups 2007), the Workshop on Non-Functional Properties and Service Level Agreements in Service-Oriented Computing (NFPSLA-SOC 2007), the 2nd International Workshop on Business-Oriented Aspects Concerning Semantics and Methodologies in Service-Oriented Computing (SeMSoC 2007), the First International Workshop on Telecom Service-Oriented Architectures (TSOA 2007) and the Third International Workshop on Engineering Service-Oriented Applications (WESOA 2007). The papers offer a wide range of hot topics in service-oriented computing: development of mashups; management of non-functional properties and service level agreements; engineering approaches; semantic methodologies; and telecom services and service architectures.
Extreme Programming and Agile Processes in Software Engineering - Italy) Xp 200 (2003 Genoa 2003-05-13
The LNCS series reports state-of-the-art results in computer science research, development, and education, at a high level and in both printed and electronic form. Enjoying tight cooperation with the R & D community, with numerous individuals, as well as with prestigious organizations and societies, LNCS has grown into the most comprehensive computer science research forum available. The scope of LNCS, including its subseries LNAI, spans the whole range of computer science and

information technology including interdisciplinary topics in a variety of application fields. Book jacket.

Assurances for Self-Adaptive Systems - Javier Cámara 2013-01-16

The increasing complexity of systems and the growing uncertainty in their operational environments have created a critical need to develop systems able to improve their operation, adapt to change, and recover from failures autonomously. This situation has led to recent advances in self-adaptive systems able to reconfigure their structure and modify their behavior at run-time to adapt to environmental changes. Despite these advances, one key aspect of self-adaptive systems that remains to be tackled in depth is "assurances": the provision of evidence that the system satisfies its stated functional and non-functional requirements during its operation in the presence of self-adaptation. This book is one of the outcomes of the ESEC/FSE 2011 Workshop on Assurances for Self-Adaptive Systems (ASAS), held in Szeged, Hungary, in September 2011. It contains extended versions of some of the papers presented during the workshop, as well as invited papers from recognized experts. The 12 refereed papers were thoroughly reviewed and selected. The book consists of four parts: formal verification, models and middleware, failure prediction, and assurance techniques.

Networked Digital Technologies - Rachid Benlamri 2012-06-02

This two-volume-set (CCIS 293 and CCIS 294) constitutes the refereed proceedings of the International Conference on Networked Digital Technologies, NDT 2012, held in Dubai, UAE, in April 2012. The 96 papers presented in the two volumes were carefully reviewed and selected from 228 submissions. The papers are organized in topical sections on collaborative systems for e-sciences; context-aware processing and ubiquitous systems; data and network mining; grid and cloud computing; information and data management; intelligent agent-based systems; internet modeling and design; mobile, ad hoc and sensor network management; peer-to-peer social networks; quality of service for networked systems; semantic Web and ontologies; security and access control; signal processing and computer vision for networked systems; social networks; Web services.

Software Engineering - Roger S. Pressman 2005

For more than 20 years, this has been the best selling guide to software engineering for students and industry professionals alike. This edition has been completely updated and contains hundreds of new references to software tools.

Mobile Context Awareness - Tom Lovett 2012-04-23

Mobile context-awareness is a popular research trend in the field of ubiquitous computing. Advances in mobile device sensory hardware and the rise of ‘virtual’ sensors such as web application programming interfaces (APIs) mean that the mobile user is exposed to a vast range of data that can be used for new advanced applications. Mobile Context Awareness presents work from industrial and academic researchers, focusing on novel methods of context acquisition in the mobile environment – particularly through the use of physical and virtual sensors – along with research into new applications utilising this context. In addition, the book provides insights into the technical and usability challenges involved in mobile context-awareness, as well as observations on current and future trends in the field.

Modeling and Simulation of Computer Networks and Systems - Mohammad S. Obaidat 2015-04-21

Modeling and Simulation of Computer Networks and Systems: Methodologies and Applications introduces you to a broad array of modeling and simulation issues related to computer networks and systems. It focuses on the theories, tools, applications and uses of modeling and simulation in order to effectively optimize networks. It describes methodologies for modeling and simulation of new generations of wireless and mobiles networks and cloud and grid computing systems. Drawing upon years of practical experience and using numerous examples and illustrative applications recognized experts in both academia and industry, discuss: Important and emerging topics in computer networks and systems including but not limited to; modeling, simulation, analysis and security of wireless and mobiles networks especially as they relate to next generation wireless networks Methodologies, strategies and tools, and strategies needed to build

computer networks and systems modeling and simulation from the bottom up Different network performance metrics including, mobility, congestion, quality of service, security and more... Modeling and Simulation of Computer Networks and Systems is a must have resource for network architects, engineers and researchers who want to gain insight into optimizing network performance through the use of modeling and simulation. Discusses important and emerging topics in computer networks and Systems including but not limited to; modeling, simulation, analysis and security of wireless and mobiles networks especially as they relate to next generation wireless networks Provides the necessary methodologies, strategies and tools needed to build computer networks and systems modeling and simulation from the bottom up Includes comprehensive review and evaluation of simulation tools and methodologies and different network performance metrics including mobility, congestion, quality of service, security and more

Advanced Content Delivery, Streaming, and Cloud Services - Mukaddim Pathan 2014-09-19

While other books on the market provide limited coverage of advanced CDNs and streaming technologies, concentrating solely on the fundamentals, this book provides an up-to-date comprehensive coverage of the state-of-the-art advancements in CDNs, with a special focus on Cloud-based CDNs. The book includes CDN and media streaming basics, performance models, practical applications, and business analysis. It features industry case studies, CDN applications, and open research issues to aid practitioners and researchers, and a market analysis to provide a reference point for commercial entities. The book covers Adaptive Bitrate Streaming (ABR), Content Delivery Cloud (CDC), Web Acceleration, Front End Optimization (FEO), Transparent Caching, Next Generation CDNs, CDN Business Intelligence and more. Provides an in-depth look at Cloud-based CDNs Includes CDN and streaming media basics and tutorials Aimed to instruct systems architects, practitioners, product developers, and researchers Material is divided into introductory subjects, advanced content, and specialist areas

Web Engineering - David Lowe 2011-04-06

Over the last few years Web Engineering has begun to gain mainstream acc- tance within the software engineering, IT and related disciplines. In particular, both researchers and practitioners are increasingly recognizing the unique c- racteristics of Web systems, and what these characteristicsimply in terms of the approaches we take to Web systems development and deployment in practice. A scan of the publications in related conference proceedings and journals highlights the diversity of the discipline areas which contribute to both the ri- ness and the complexity of Web Engineering. The 5th International Conference on Web Engineering (ICWE2005), held in Sydney, Australia, extends the traditions established by the earlier conferences in the series: ICWE2004 in Munich, Germany; ICWE2003 in Oviedo, Spain; ICWE2002 in Santa Fe, Argentina; and ICWE2001 in Caceres,´ Spain. Not only have these conferences helped disseminate cutting edge research within the ?eld of Web Engineering, but they have also helped de?ne and shape the discipline itself.TheprogramwehaveputtogetherforICWE2005continuesthisevolution. Indeed, we can now begin to see the maturing of the ?eld. For possibly the ?rst time, there was very little debate within the Program Committee about which papers were in and out of scope, and much more debate as to the each papers contributions to the ?eld.

Database Systems for Advanced Applications - Kian Lee Tan 2006-03-11

This book constitutes the refereed proceedings of the 11th International Conference on Database Systems for Advanced Applications, DASFAA 2006, held in Singapore in April 2006. 46 revised full papers and 16 revised short papers presented were carefully reviewed and selected from 188 submissions. Topics include sensor networks, subsequence matching and repeating patterns, spatial-temporal databases, data mining, XML compression and indexing, xpath query evaluation, uncertainty and streams, peer-to-peer and distributed networks and more.

ICT Innovations 2010 - Marjan Gusev 2011-02-24

This book constitutes the refereed proceedings of the Second International Conference, ICT Innovations 2010, held in Ohrid, Macedonia, in September 2010. The 33 revised papers presented together with 5

invited papers were carefully reviewed and selected. The papers address the following topics: internet applications and services, artificial intelligence, bioinformatics, internet, mobile and wireless technologies, multimedia information systems, computer networks, computer security, e-business, cryptography, high-performance-computing, social networks, e-government, as well as GPU computing.

Production-Ready Microservices - Susan J. Fowler 2016-11-30

One of the biggest challenges for organizations that have adopted microservice architecture is the lack of architectural, operational, and organizational standardization. After splitting a monolithic application or building a microservice ecosystem from scratch, many engineers are left wondering what's next. In this practical book, author Susan Fowler presents a set of microservice standards in depth, drawing from her experience standardizing over a thousand microservices at Uber. You'll learn how to design microservices that are stable, reliable, scalable, fault tolerant, performant, monitored, documented, and prepared for any catastrophe. Explore production-readiness standards, including: Stability and Reliability: develop, deploy, introduce, and deprecate microservices; protect against dependency failures Scalability and Performance: learn essential components for achieving greater microservice efficiency Fault Tolerance and Catastrophe Preparedness: ensure availability by actively pushing microservices to fail in real time Monitoring: learn how to monitor, log, and display key metrics; establish alerting and on-call procedures Documentation and Understanding: mitigate tradeoffs that come with microservice adoption, including organizational sprawl and technical debt

Scaling for E-business - Daniel A. Menascé 2000

This book presents analysis techniques for quantifying and projecting every element of your e-business site's performance and planning for the capacity you need.

Performance by Design - Daniel MenascÃƒÆ'Ã‚Â© 2004

Practical, real-world solutions are given to potential problems covering the entire system life cycle. This book describes how to map real-life systems (databases, data centers, and e-commerce applications) into analytic performance models. The authors elaborate upon these models and use them to help the reader better understand performance issues.

Service-Oriented Computing - E. Michael Maximilien 2011-03-04

This book constitutes the joint post-proceedings of four topical workshops held as satellite meetings of the 8th International Conference on service-oriented computing, ICSOC 2010, held in San Francisco, CA, USA in December 2010. The 23 revised papers presented together with four introductory descriptions are organized in topical sections corresponding to the individual workshops: performance assessment and auditing in service computing (PAASC 2010), engineering service-oriented applications (WESOA 2010), services, energy and ecosystems (SEE 2010), and service-oriented computing in logistics (SOC-LOG 2010)

The Internet Encyclopedia - Hossein Bidgoli 2004

The Internet Encyclopedia in a 3-volume reference work on the internet as a business tool, IT platform, and communications and commerce medium.

Guerrilla Capacity Planning - Neil J. Gunther 2007-01-17

Under today's shortened fiscal horizons and contracted time-to-market schedules, traditional approaches to capacity planning are seen by management as inflating production schedules. In the face of relentless pressure to get things done faster, this book facilitates rapid forecasting of capacity requirements, based on opportunistic use of available performance data and tools so that management insight is expanded but production schedules are not. The book introduces such concepts as an iterative cycle of improvement called "The Wheel of Capacity Planning," and Virtual Load Testing, which provides a highly cost-effective method for assessing application scalability.

Search Engines, Link Analysis, and User's Web Behavior - George Meghabghab 2008-04-24

This book presents a specific and unified approach framework to three major components: Search Engines Performance, Link Analysis, and User's Web Behavior. The book can be used by researchers in the fields of information sciences, engineering (especially software), computer science, statistics and management, who are looking for a unified theoretical approach to finding relevant information on the WWW and a

way of interpreting it from a data perspective to a user perspective.

Web Services in the Enterprise - Akhil Sahai 2007-01-31

Enterprise IT infrastructure is getting increasingly complex. With the increase in complexity has arisen the need to manage it. Management in general can be seen as the process of assuring that a managed entity meets its expectations in a controlled and predictable manner. Examples of managed entities are not only components, entire systems, processes, but also people such as employees, developers, or operators, and entire organizations. Traditional management has addressed some of these issues in varied manner. The emergence of Web services has added a new complexity to the management problem and poses a new set of problems. But it also adds to the mix a set of technologies that will make the task of management simpler. Management of Web services will be critical as businesses come to rely on them as a substantial source of their revenue. The book tries to cover the broad area of web services, the concepts, implications for the enterprise, issues involved in their management and how they are being used for management themselves. The book is intended as a reference for current practice and future directions for web services and their management. The book is directed at: • Computing professionals, academicians and students to learn about the important concepts behind the web services paradigm and how it impacts the enterprise in general and how it affects traditional application, network and system management.

Fuzzy Probabilities and Fuzzy Sets for Web Planning - James J. Buckley 2012-09-23

1.1 Introduction This book is written in five major divisions. The first part is the introduc tory chapters consisting of Chapters 1-3. In part two, Chapters 4-10, we use fuzzy probabilities to model a fuzzy queuing system . We switch to employ ing fuzzy arrival rates and fuzzy service rates to model the fuzzy queuing system in part three in Chapters 11 and 12. Optimization models comprise part four in Chapters 13-17. The final part has a brief summary and sug gestions for future research in Chapter 18, and a summary of our numerical methods for calculating fuzzy probabilities, values of objective functions in fuzzy optimization, etc., is in Chapter 19. First we need to be familiar with fuzzy sets. All you need to know about fuzzy sets for this book comprises Chapter 2. Two other items relating to fuzzy sets, needed in Chapters 13-17, are also in Chapter 2: (1) how we plan to handle the maximum/minimum of a fuzzy set; and (2) how we will rank a finite collection of fuzzy numbers from smallest to largest.

Fundamentals of Performance Evaluation of Computer and Telecommunication Systems - Mohammed S. Obaidat 2010-01-26

The only singular, all-encompassing textbook on state-of-the-art technical performance evaluation Fundamentals of Performance Evaluation of Computer and Telecommunication Systems uniquely presents all techniques of performance evaluation of computers systems, communication networks, and telecommunications in a balanced manner. Written by the renowned Professor Mohammad S. Obaidat and his coauthor Professor Noureddine Boudriga, it is also the only resource to treat computer and telecommunication systems as inseparable issues. The authors explain the basic concepts of performance evaluation, applications, performance evaluation metrics, workload types, benchmarking, and characterization of workload. This is followed by a review of the basics of probability theory, and then, the main techniques for performance evaluation—namely measurement, simulation, and analytic modeling—with case studies and examples. Contains the practical and applicable knowledge necessary for a successful performance evaluation in a balanced approach Reviews measurement tools, benchmark programs, design of experiments, traffic models, basics of queueing theory, and operational and mean value analysis Covers the techniques for validation and verification of simulation as well as random number generation, random variate generation, and testing with examples Features numerous examples and case studies, as well as exercises and problems for use as homework or programming assignments Fundamentals of Performance Evaluation of Computer and Telecommunication Systems is an ideal textbook for graduate students in computer science, electrical engineering, computer engineering, and information sciences, technology, and systems. It is also an excellent reference for practicing engineers and scientists.

Geospatial Web Services: Advances in Information Interoperability - Zhao, Peisheng 2010-12-31

As Web service technologies have matured in recent years, an increasing number of geospatial Web services designed to deal with spatial information over the network have emerged. Geospatial Web Services: Advances in Information Interoperability provides relevant theoretical frameworks and the latest empirical research findings and applications in the area. This book highlights the strategic role of geospatial Web services in a distributed heterogeneous environment and the life cycle of geospatial Web services for building interoperable geospatial applications.

The Art of Capacity Planning - Arun Kejariwal 2017-09-21

In their early days, Twitter, Flickr, Etsy, and many other companies experienced sudden spikes in activity that took their web services down in minutes. Today, determining how much capacity you need for handling traffic surges is still a common frustration of operations engineers and software developers. This hands-on guide provides the knowledge and tools you need to measure, deploy, and manage your web application infrastructure before you experience explosive growth. In this thoroughly updated edition, authors Arun Kejariwal (MZ) and John Allspaw provide a systematic, robust, and practical approach to capacity planning—rather than theoretical models—based on their own experiences and those of many colleagues in the industry. They address the vast sea change in web operations, especially cloud computing. Understand issues that arise on heavily trafficked websites or mobile apps Explore how capacity fits into web/mobile app availability and performance Use tools for measuring and monitoring computer performance and usage Turn measurement data into robust forecasts and learn how trending fits into the planning process Examine related deployment concepts: installation, configuration, and management automation Learn how cloud autoscaling enables you to scale your app’s capacity up or down

Foundations of Software and System Performance Engineering - André B. Bondi 2014-07-05

The absence of clearly written performance requirements is the cause of much confusion and bad software architectures; this book's coverage of performance requirements engineering and domain-specific performance metrics at every stage of the software process addresses the problem. Application of the principles in this book will considerably mitigate the risks that performance post to the success of a software system and lead to a better quality product with wider acceptance.

Software Engineering for Modern Web Applications: Methodologies and Technologies - Brandon, Daniel M. 2008-06-30

"This book presents current, effective software engineering methods for the design and development of modern Web-based applications"--Provided by publisher.

Data Science for COVID-19 Volume 1 - Utku Kose 2021-05-20

Data Science for COVID-19 presents leading-edge research on data science techniques for the detection, mitigation, treatment and elimination of COVID-19. Sections provide an introduction to data science for COVID-19 research, considering past and future pandemics, as well as related Coronavirus variations. Other chapters cover a wide range of Data Science applications concerning COVID-19 research, including Image Analysis and Data Processing, Geoprocessing and tracking, Predictive Systems, Design Cognition, mobile technology, and telemedicine solutions. The book then covers Artificial Intelligence-based solutions, innovative treatment methods, and public safety. Finally, readers will learn about applications of Big Data and new data models for mitigation. Provides a leading-edge survey of Data Science techniques and methods for research, mitigation and treatment of the COVID-19 virus Integrates various Data Science techniques to provide a resource for COVID-19 researchers and clinicians around the world, including both positive and negative research findings Provides insights into innovative data-oriented modeling and predictive techniques from COVID-19 researchers Includes real-world feedback and user experiences from physicians and medical staff from around the world on the effectiveness of applied Data Science solutions

Capacity Planning for Web Services - Daniel A. Menascé 2002

MenascT (computer science, George Mason U.) and Almeida (computer science, U. of Minas Gerais, Brazil) provide a quantitative analysis of Web

service availability and a framework for understanding and planning Web services. They discuss benchmarking, load testing, workload forecasting, and performan

Performance Evaluation of Complex Systems: Techniques and Tools - Maria Carla Calzarossa 2003-08-02

This book presents the tutorial lectures given by leading experts in the area at the IFIP WG 7.3 International Symposium on Computer Modeling, Measurement and Evaluation, Performance 2002, held in Rome, Italy in September 2002.The survey papers presented are devoted to theoretical and methodological advances in performance and reliability evaluation as well as new perspectives in the major application fields. Modeling and verification issues, solution methods, workload characterization, and benchmarking are addressed from the methodological point of view. Among the applications dealt with are hardware and software architectures, wired and wireless networks, grid environments, Web services, and real-time voice and video processing.This book is intended to serve as a state-of-the-art survey and reference for students, scientists, and engineers active in the area of performance and reliability evaluation.

Formal Methods and Stochastic Models for Performance Evaluation - András Horváth 2006-06-20

This book constitutes the refereed proceedings of the Third European Performance Engineering Workshop, EPEW 2006, held in Budapest, Hungary in June 2006. The 16 revised full papers presented were carefully reviewed and selected from 40 submissions. The papers are organized in topical sections on stochastic process algebra, workloads and benchmarks, theory of stochastic processes, formal dependability and performance evaluation, as well as queues, theory and practice.

From Integrated Publication and Information Systems to Information and Knowledge Environments - Matthias Hemmje 2005-01-27

This book constitutes a commemorative volume devoted to Erich J. Neuhold on the occasion of his 65th birthday. The 32 invited reviewed papers presented are written by students and colleagues of Erich Neuhold throughout all periods of his scientific career. The papers are organized in the following topical sections: Database management enabling information systems Semantic Web drivers for advanced information management Securing dynamic media content integration From digital libraries to intelligent knowledge environments Visualization – key to external cognition in virtual information environments From human-computer interaction to human-artefact interaction Domains for virtual information and knowledge environments.

Site Reliability Engineering - Niall Richard Murphy 2016-03-23

The overwhelming majority of a software system’s lifespan is spent in use, not in design or implementation. So, why does conventional wisdom insist that software engineers focus primarily on the design and development of large-scale computing systems? In this collection of essays and articles, key members of Google’s Site Reliability Team explain how and why their commitment to the entire lifecycle has enabled the company to successfully build, deploy, monitor, and maintain some of the largest software systems in the world. You’ll learn the principles and practices that enable Google engineers to make systems more scalable, reliable, and efficient—lessons directly applicable to your organization. This book is divided into four sections: Introduction—Learn what site reliability engineering is and why it differs from conventional IT industry practices Principles—Examine the patterns, behaviors, and areas of concern that influence the work of a site reliability engineer (SRE) Practices—Understand the theory and practice of an SRE’s day-to-day work: building and operating large distributed computing systems Management—Explore Google's best practices for training, communication, and meetings that your organization can use

Computational Intelligence and Informatics - Imre J. Rudas 2010-10-08

The International Symposium of Hungarian Researchers on Computational Intel- th gence and Informatics celebrated its 10 edition in 2009. This volume contains a careful selection of papers that are based on and are extensions of corresponding l- tures presented at the jubilee conference. This annual Symposium was launched by Budapest Tech (previously Budapest Polytechnic) and by the Hungarian Fuzzy Association in 2000, with the aim to bring together Hungarian speaking researchers working

on computational intelligence and related topics from all over the world, but with special emphasis on the Central Eu- pean Region. th The Symposium of the 10 jubilee anniversary contained 70 reviewed papers. The growing interests, the enthusiasm of the participants have proved that the Symposium has become an internationally recognized scientific event providing a good platform for the annual meeting of Hungarian researchers. The main subject area called Computational Intelligence includes diverse topics. Therefore, we offer snapshots rather than a full coverage of a small particular subject to the interested reader. This principle is also supported by the common national root of the authors. The book begins with Information Systems and Communication. This part contains papers on graphs of grammars, software and hardware solution for Mojette transf- mation, statistical intrusion detection, congestion forecast, and 3D-based internet communication and control.

Advances in Web-Age Information Management - Wenfei Fan 2005-10-20

This book constitutes the refereed proceedings of the 6th International Conference on Web-Age Information Management, WAIM 2005, held in Hangzhou, China, in October 2005. The 48 revised full papers, 50 revised short papers and 4 industrial papers presented together with 3 invited contributions were carefully reviewed and selected from 486 submissions. The papers are organized in topical sections on XML, performance and query evaluation, data mining, semantic Web and Web ontology, data management, information systems, Web services and workflow, data grid and database languages, agent and mobile data, database application and transaction management, and 3 sections with industrial, short, and demonstration papers.

Modeling and Simulating Software Architectures - Ralf H. Reussner 2016-10-21

A new, quantitative architecture simulation approach to software design that circumvents costly testing cycles by modeling quality of service in early design states. Too often, software designers lack an understanding of the effect of design decisions on such quality attributes as performance and reliability. This necessitates costly trial-and-error testing cycles, delaying or complicating rollout. This book presents a new, quantitative architecture simulation approach to software design, which allows software engineers to model quality of service in early design stages. It presents the first simulator for software architectures, Palladio, and shows students and professionals how to model reusable, parametrized components and configured, deployed systems in order to analyze service attributes. The text details the key concepts of Palladio's domain-specific modeling language for software architecture quality and presents the corresponding development stage. It describes how quality information can be used to calibrate architecture models from which detailed simulation models are automatically derived for quality predictions. Readers will learn how to approach systematically questions about scalability, hardware resources, and efficiency. The text features a running example to illustrate tasks and methods as well as three case studies from industry. Each chapter ends with exercises, suggestions for further reading, and “takeaways” that summarize the key points of the chapter. The simulator can be downloaded from a companion website, which offers additional material. The book can be used in graduate courses on software architecture, quality engineering, or performance engineering. It will also be an essential resource for software architects and software engineers and for practitioners who want to apply Palladio in industrial settings.

Computer and Information Sciences - ISCIS 2005 - Pinar Yolum 2005-11-16

This book constitutes the refereed proceedings of the 20th International Symposium on Computer and Information Sciences, ISCIS 2005, held in Istanbul, Turkey in October 2005. The 92 revised full papers presented together with 4 invited talks were carefully reviewed and selected from 491 submissions. The papers are organized in topical sections on computer networks, sensor and satellite networks, security and cryptography, performance evaluation, e-commerce and Web services, multiagent systems, machine learning, information retrieval and natural language processing, image and speech processing, algorithms and database systems, as well as theory of computing.

Advances in Web-Age Information Management - Quing Li 2011-04-05

This book constitutes the refereed proceedings of the 5th International

Conference on Web-Age Information Management, WAIM 2004, held in Dalian, China in July 2004. The 57 revised full papers and 23 revised short and industrial papers presented together with 3 invited contributions were carefully reviewed and selected from 291 submissions. The papers are organized in topical sections on data stream processing, time series data processing, security, mobile computing, cache management, query evaluation, Web search engines, XML, Web services, classification, and data mining.

The Art of Capacity Planning - John Allspaw 2008-09-23

Success on the web is measured by usage and growth. Web-based companies live or die by the ability to scale their infrastructure to accommodate increasing demand. This book is a hands-on and practical guide to planning for such growth, with many techniques and considerations to help you plan, deploy, and manage web application infrastructure. The Art of Capacity Planning is written by the manager of data operations for the world-famous photo-sharing site Flickr.com, now owned by Yahoo! John Allspaw combines personal anecdotes from many phases of Flickr's growth with insights from his colleagues in many other industries to give you solid guidelines for measuring your growth, predicting trends, and making cost-effective preparations. Topics include: Evaluating tools for measurement and deployment Capacity analysis and prediction for storage, database, and application servers Designing architectures to easily add and measure capacity Handling sudden spikes Predicting exponential and explosive growth How cloud services such as EC2 can fit into a capacity strategy In this book, Allspaw draws on years of valuable experience, starting from the days when Flickr was relatively small and had to deal with the typical growth pains and cost/performance trade-offs of a typical company with a Web presence. The advice he offers in The Art of Capacity Planning will not only help you prepare for explosive growth, it will save you tons of grief.

Model-Driven Online Capacity Management for Component-Based Software Systems - André van Hoorn 2014-10-15

Capacity management is a core activity when designing and operating distributed software systems. Particularly, enterprise application systems are exposed to highly varying workloads. Employing static capacity management, this leads to unnecessarily high total cost of ownership due to poor resource usage efficiency. This thesis introduces a model-driven online capacity management approach for distributed component-based software systems, called SLAstic. The core contributions of this approach are a) modeling languages to capture relevant architectural information about a controlled software system, b) an architecture-based online capacity management framework based on the common MAPE-K control loop architecture, c) model-driven techniques supporting the automation of the approach, d) architectural runtime reconfiguration operations for controlling a system’s capacity, as well as e) an integration of the Palladio Component Model. A qualitative and quantitative evaluation of the approach is performed by case studies, lab experiments, and simulation.

Software Design and Development: Concepts, Methodologies, Tools, and Applications - Management Association, Information Resources 2013-07-31

Innovative tools and techniques for the development and design of software systems are essential to the problem solving and planning of software solutions. Software Design and Development: Concepts, Methodologies, Tools, and Applications brings together the best practices of theory and implementation in the development of software systems. This reference source is essential for researchers, engineers, practitioners, and scholars seeking the latest knowledge on the techniques, applications, and methodologies for the design and development of software systems.