

## Delivery And Adoption Of Cloud Computing Services In Contemporary Organizations Advances In Systems Analysis Software Engineering And High Performance Computing

The pace of technological change is accelerating, hyper competition is growing, opportunities for business model disruption are exploding, and comprehensive cloud delivery is readily available. These factors challenge every aspect of business technology strategy. The Innovator 's Imperative: Rapid Technology Adoption for Digital Transformation prepares twenty-first century businesses leaders for competing and leading in this disruptive digital environment. Five years of research conducted by the authors suggests that leading companies have all but abandoned the requirements analysis and modeling best practices of the twentieth century. Accordingly, the authors put forth the innovator 's imperative that contends: All companies wanting to be competitive should adopt emerging and disruptive technologies as quickly as possible, and in many cases, immediately. Technology is driving business strategy, and companies are rethinking their technology strategy, especially the governance that determines how and why technology investments are made. Based on their research the authors have developed a five-step framework for digital transformation: Model and simulate Identify high-leverage opportunities Prioritize transformational targets Identify digital opportunities Find courageous leaders The book explains each of these steps to guide business leaders in architecting digital transformation projects according to their organization 's market positions, budgets, objectives, and corporate culture. Hyper-competitive, disruptive companies are jumping across technology adoption phases without regard to any phasing whatsoever. Companies focused on digital transformation often adopt emerging technologies immediately. They have become early adopters of technologies that can impact existing—and create whole new—business models and processes. This book examines this jump into new technologies, processes, and business models to prepare twenty-first century business leaders to make that leap.

Distributed systems intertwine with our everyday lives. The benefits and current shortcomings of the underpinning technologies are experienced by a wide range of people and their smart devices. With the rise of large-scale IoT and similar distributed systems, cloud bursting technologies, and partial outsourcing solutions, private entities are encouraged to increase their efficiency and offer unparalleled availability and reliability to their users. The Research Anthology on Architectures, Frameworks, and Integration Strategies for Distributed and Cloud Computing is a vital reference source that provides valuable insight into current and emergent research occurring within the field of distributed computing. It also presents architectures and service frameworks to achieve highly integrated distributed systems and solutions to integration and efficient management challenges faced by current and future distributed systems. Highlighting a range of topics such as data sharing, wireless sensor networks, and scalability, this multi-volume book is ideally designed for system administrators, integrators, designers, developers, researchers, academicians, and students.

Additional written evidence is available in Volume 3, available on the Committee website [www.parliament.uk/pasc](http://www.parliament.uk/pasc)

Drawing on an international survey of over 1,000 business and executives, this book provides a management perspective on cloud technology. It outlines the need to know information for strategic decisions on cloud technology including its capabilities, how it can be implemented securely and the way forward for the next ten years.

Bringing Agility and Efficiency to the Global Software Supply Chain

Concepts, Methodologies, Tools, and Applications

Cloud Computing Security

The Economics of Cloud Computing

How to face the challenges and harness the potential of cloud computing

Designing Networks and Services for the Cloud

***Delivery and Adoption of Cloud Computing Services in Contemporary Organizations*** IGI Global  
***Cloud Computing, a new prototype of computing infrastructure provision, gives an assurance of fulfilling a dream of optimal utilization of computer utilities for an economical and smooth functioning of businesses. In Cloud Computing, the economic aspect along with cloud offerings is a research topic in itself. This research presents an overview of the economic aspects involved. Cloud architecture brings with it an assurance of a low-cost delivery, speedy implementation, enhanced flexibility and thus has been adopted widely in a very short period of time. Statistics show that there is a possibility of the cloud services market reaching a level of 160 billion dollars by the year 2020. Although cloud computing technology is being widely accepted, the research is still in the beginning stage. This research attempts to bring out the viability of adoption of this technology based on suitability index and uses further, parameters like number of servers, geographical coverage, extent of data to be migrated, size of operations of the companies and the various financial parameters like ROI (Return on Investment), Payback period, NPV (Net Present Value). However there is more in-depth research that requires to go into the details of company business and gaining further insight into cloud adoption. Here, the study encompasses 35 companies with a view to provide different available variations in terms of all the above mentioned parameters in an attempt to aid the decision making regarding adoption of cloud architecture. The research highlights the reasons for the adoption of cloud architecture by different companies from the chosen 35 companies. The researcher is optimistic that this research will definitely prove helpful in taking the correct decision and will help more number of companies to implement the cloud technology and reap the benefits of the same. Keywords: Cloud Computing, Architecture, Suitability, ROI, Adoption of cloud or Migration.***

***Cloud Enterprise Architecture examines enterprise architecture (EA) in the context of the surging popularity of Cloud computing. It explains the different kinds of desired transformations the***

**architectural blocks of EA undergo in light of this strategically significant convergence. Chapters cover each of the contributing architectures of EA—business, information, application, integration, security, and technology—illustrating the current and impending implications of the Cloud on each. Discussing the implications of the Cloud paradigm on EA, the book details the perceptible and positive changes that will affect EA design, governance, strategy, management, and sustenance. The author ties these topics together with chapters on Cloud integration and composition architecture. He also examines the Enterprise Cloud, Federated Clouds, and the vision to establish the InterCloud. Laying out a comprehensive strategy for planning and executing Cloud-inspired transformations, the book: Explains how the Cloud changes and affects enterprise architecture design, governance, strategy, management, and sustenance Presents helpful information on next-generation Cloud computing Describes additional architectural types such as enterprise-scale integration, security, management, and governance architectures This book is an ideal resource for enterprise architects, Cloud evangelists and enthusiasts, and Cloud application and service architects. Cloud center administrators, Cloud business executives, managers, and analysts will also find the book helpful and inspirational while formulating appropriate mechanisms and schemes for sound modernization and migration of traditional applications to Cloud infrastructures and platforms.**

**For the last twenty years, we have witnessed how new technologies have changed organizations to adapt in order to compete or face nonexistence. This book will explain how cloud computing will be the most radical transformation of business processes every organization will face to date. Is cloud computing a strategic advantage? Cloud computing will reclassify service delivery models in ways that organizations have never seen before. IT organizations will become commoditized and in the center of the new business transformation. Is cloud computing about survival, or is it in pursuit of better values? Organizations who embrace this new ecosystem, adopting cloud computing and the mind-sets it personifies, will have guaranteed their existence. Organizations are leveraging the cloud to cut costs and deliver a better customer experience rapidly and consistently. But is it working? In this book, we discuss how cloud computing is commoditizing IT and if cloud computing is a real threat or an irresistible opportunity. How is cloud computing revolutionizing the financial industry and the way we conduct business? Part I we explain how to build a successful cloud computing strategy, and also share details of the survey results we conducted in my Ph.D. dissertation on cloud computing adoption models and the decision-making variables and factors that take place. Part II of the book is ideal for graduate students and doctoral candidates who are working on empirical academic research. We discuss the cloud computing adoption life cycle, theory of innovation diffusion, research questions, hypotheses, measurement instruments, the way that emotions drive technology adoption, and dependent and independent variables. Part III of the book includes relevant case study samples, beneficial for those who are looking for writing in an academic style and case study research. Who should read this book? This book is aimed at senior leadership and information technology (IT) professionals at all levels. Also, this is a book for IT graduate students, both MBA and doctoral, who seek to learn a great deal about emerging technologies and formal research methodologies.**

**The Death of Core Competency: A Management Guide to Cloud Computing and the Zero Friction Future  
Cloud Migration Handbook Vol. 1: A Practical Guide to Successful Cloud Adoption and Migration**

**The Imperative Venture For Every Enterprise**

**The DevOps Adoption Playbook**

**ICT: Applications and Social Interfaces**

**Accelerating Cloud Adoption**

**This book focuses on the development and implementation of cloud-based, complex software that allows parallelism, fast processing, and real-time connectivity. Software engineering (SE) is the design, development, testing, and implementation of software applications, and this discipline is as well developed as the practice is well established whereas the Cloud Software Engineering (CSE) is the design, development, testing, and continuous delivery of service-oriented software systems and applications (Software as a Service Paradigm). However, with the emergence of the highly attractive cloud computing (CC) paradigm, the tools and techniques for SE are changing. CC provides the latest software development environments and the necessary platforms relatively easily and inexpensively. It also allows the provision of software applications equally easily and on a pay-as-you-go basis. Business requirements for the use of software are also changing and there is a need for applications in big data analytics, parallel computing, AI, natural language processing, and biometrics, etc. These require huge amounts of computing power and sophisticated data management mechanisms, as well as device connectivity for Internet of Things (IoT) environments. In terms of hardware, software, communication, and storage, CC is highly attractive for developing complex software that is rapidly becoming essential for all sectors of life, including commerce, health, education, and transportation. The book fills a gap in the SE literature by providing scientific contributions from researchers and practitioners, focusing on frameworks, methodologies, applications, benefits and inherent challenges/barriers to engineering software using the CC paradigm.**

**"This book provides research on business intelligence in cloud computing and explores its**

*applications in conjunction with other tools"--*

*Cloud computing represents a sea change in the delivery of IT-dependent business services...but how does it shape enterprise priorities and actions? In The Death of Core Competency, Michael O'Neil argues that in the 'day of cloud', the key issue is the ability to apply cloud-based automation within each task and across all processes, creating an entirely new enterprise operating model. Executives who focus on a handful of core competencies will be eclipsed by firms led by management that is in tune with the efficiency gains, the expanded reach and the improved business insight delivered by cloud business infrastructure. The Death of Core Competency also includes a 12-step guide to building a strategic framework for deploying cloud-based business capabilities, experience-based insight and practical guidance on business planning and cloud adoption, and an analysis of what staff members, IT management and corporate executives need to understand - and do - to capitalize on the zero-friction future.*

*As the applications of the Internet of Things continue to progress, so do the security concerns for this technology. The study of threat prevention in the Internet of Things is necessary, as security breaches in this field can ruin industries and lives. Security Breaches and Threat Prevention in the Internet of Things provides a comprehensive examination of the latest strategies and methods for tracking and blocking threats within industries that work heavily with this technology. Featuring chapters on emerging topics such as security threats in autonomous vehicles, digital forensics, secure communications, and image encryption, this critical reference source is a valuable tool for all academicians, graduate students, practitioners, professionals, and researchers who are interested in expanding their knowledge of security practices pertaining to the Internet of Things.*

*Web-Based Services: Concepts, Methodologies, Tools, and Applications  
Government and IT - "a recipe for rip-offs"*

*Information and Communication Technology for Competitive Strategies (ICTCS 2020)*

*Heterogeneity, High Performance Computing, Self-Organization and the Cloud*

*Advancing Medical Practice through Technology: Applications for Healthcare Delivery, Management, and Quality*

*A Guide to Adopting DevOps in a Multi-Speed IT Enterprise*

Software applications once held on local computers and servers are beginning to shift to the public Internet sphere, and private health information is no exception. The likelihood of placing once restricted and private health records "in the cloud" is increasing. Cloud Computing Applications for Quality Health Care Delivery focuses on cloud technologies that could affect quality in the healthcare field. Leading experts in this area offer their knowledge and contribute to the demystification of healthcare in the Cloud. This publication will prove to be a useful tool for undergraduate and graduate students of healthcare quality and management, healthcare managers, and industry professionals.

For many years now Enterprise Information Systems have been critical in helping businesses successfully navigate the global market. The development that started with design and implementation of integrated systems has evolved to incorporate a multitude of perspectives and ideas. The Enterprise Information Systems functionality extends from principally an ERP (Enterprise Resource Planning) system to a portfolio of standard systems including CRM (Customer Relationship Management) systems and SCM (Supply Chain Management) systems. Advances in Enterprise Information Systems II is divided into seven thematic sections, each exploring a distinct topic. In "Concepts in Enterprise Information Systems" the authors present new concepts and ideas for the field. "Cases in Enterprise Information Systems" introduces studies of enterprise information systems in an organizational context. "Business Process Management" is one of the major themes within enterprise information systems and "Designing Enterprise Information Systems" discusses new approaches to the design of processes and system and also deals with how design can be taken as a specific perspective. "Enterprise Information Systems in various domains" features generic studies that contribute to advancing the practical knowledge of the field as well as towards "Global issues of Enterprise Information Systems". Finally, in "Emerging Topics in Enterprise Information Systems", new technologies and ideas are explored. Cloud computing in particular seems to be setting the agenda for future research in enterprise information systems. The book will be invaluable to academics and professionals interested in recent developments in the field of enterprise information systems. This book contains the best selected research papers presented at ICTCS 2020: Fifth International Conference on Information and Communication Technology for Competitive Strategies. The conference was held at Jaipur, Rajasthan, India, during 11-12 December 2020. The book covers state-of-the-art as well as emerging topics pertaining to ICT and effective strategies for its implementation for engineering and managerial applications. This book contains papers mainly focused on ICT for computation, algorithms and data analytics, and IT security.

This invaluable guide addresses the Why, What, and How of enterprise cloud adoption, leveraging a clear framework and proven best practices from Microsoft's own experience. "Great book. What's particularly impressive is the outline of steps Microsoft itself is taking in its move to the cloud. Do as I do is always more powerful than do as I say." —Al Ries, Coauthor, War in the Boardroom "This book takes on enterprise cloud adoption to a level I've not seen before—made even more elegant with its structured framework and crisp approach." —Anthony D. Christie, CMO, Level 3 Communications, Former CTO/CIO, Global Crossing "A practical and timely guide that covers the entire journey to the cloud from an enterprise perspective, including business, technology, and organizational impact." —Bart Luijten, CIO Corporate Functions & Corporate Technology, Philips "The cloud powers business solutions for building tomorrow's enterprise and this book offers a simple, well-structured, and high-level process map for cloud adoption." —Kris Gopalakrishnan, Executive Co-Chairman, Infosys Limited Cloud computing is full of tremendous opportunity, but is also riddled with hype and confusion. Business and technology leaders know the cloud is essential, but lack clarity and experience. To the Cloud cuts through the noise and addresses the Why, What, and How of enterprise cloud adoption. The book lays out a four-step framework leveraging the experience and best practices of Microsoft's own IT group. It provides end-to-end business and technology guidance, including how to analyze application portfolios to identify good cloud candidates, choose the right cloud models, consider architecture and security, and understand how shifting operations to the cloud affects budgeting and staffing. The book is applicable to all cloud platforms and providers, and debunks myths in its clear and concise style (e.g., real clouds are more than just web hosting, virtualization, or the Internet itself rebranded). It takes a balanced approach, addressing concerns and hybrid adoption scenarios alike. Leveraging the authors'

proven expertise working for Microsoft's CIO on cloud migration and with cloud platform development teams, the book is supported by clear frameworks, graphics, tables, summaries, and checklists to provide a true practitioner's guide to the cloud. In this book, you will learn how to Explore cloud computing to understand its promise and challenges Envision how cloud computing can transform your organization Enable your organization with the necessary resources and skills Execute the design, development, and operation of cloud workloads To the Cloud is an essential guide for IT professionals seeking to lower total cost of ownership, improve the return on IT investment of existing services, or help the business bring new products to market more quickly.

**Advances and Trends in Cloud Computing**

**How Risks and Threats are Affecting Cloud Adoption Decisions**

**Security Breaches and Threat Prevention in the Internet of Things**

**Applying Big Data Analytics in Bioinformatics and Medicine**

**Emerging Research and Opportunities**

**Recent Advances in Industrial Production**

This book includes high-quality, peer-reviewed papers from the International Conference on Recent Advancement in Computer, Communication and Computational Sciences (RACCCS-2018), held at Aryabhatta College of Engineering & Research Center, Ajmer, India on August 10-11, 2018, presenting the latest developments and technical solutions in computational sciences. Networking and communication are the backbone of data science, data- and knowledge engineering, which have a wide scope for implementation in engineering sciences. This book offers insights that reflect the advances in these fields from upcoming researchers and leading academicians across the globe. Covering a variety of topics, such as intelligent hardware and software design, advanced communications, intelligent computing technologies, advanced software engineering, the web and informatics, and intelligent image processing, it helps those in the computer industry and academia use the advances in next-generation communication and computational technology to shape real-world applications.

Many IT professionals would agree that cloud computing is the most revolutionary information delivery model since the introduction of the Internet. For corporate management and decision makers, cloud computing brings many financial and functional benefits as well as serious security concerns that may threaten business continuity and corporate reputation. The definition of cloud computing is still blurry in a large part, because of the magnitude of the security risks and the virtually unlimited amount of information being published. The purpose of this research is to assess how cloud security risks and threats most commonly discussed today are affecting current and prospective cloud users' decisions on adoption. In this research, both practitioner and academic literature was reviewed in order to incorporate views from both sides on cloud security, as well as technology white papers, government reports, and recent market and security articles. Then an online survey targeting current and prospective cloud users was conducted, and real-life driving and resisting forces of cloud adoption were assessed. The survey posed questions about a variety of security risks, and even though the respondents indicated concerns about these risks, none of them were voted as a "show stopper" in cloud adoption. Furthermore, the majority of respondents were confident with their cloud service providers' protection mechanism, while being well aware of the existence of the risk. This book presents the select proceedings of the International Conference on Evolution in Manufacturing (ICEM 2020), and examines a range of areas including evolution in manufacturing, intelligent networks, bio-Inspired models and algorithms, internet-of-things, and cyber manufacturing. This book intends to provide a contribution to the domain of collaborative and intelligent networks and systems to fill the gap in theories and practical applications through suitable methods and solutions applicable to a wide range of instances. Various topics covered include broad range of research challenges in the fields of artificial intelligence and addressing current and future trends in industry 4.0 oriented scenario, data analytics and big data, operation and manufacturing management. The book will be a valuable reference for beginners, researchers and professionals interested in artificial intelligence in engineering and production management and allied fields.

Master breakthrough new approaches to enterprise software delivery that address today's radically new development and business challenges • •Helps development leaders strategically balance agility and efficiency in response to massive new global economic and technical trends. •Offers specific, practical solutions for improving control, visibility, and efficiency. •By Alan W. Brown -- IBM Distinguished Engineer, IBM Rational CTO, and one of the world's leading experts on high-value enterprise software delivery.

Globalization, rapid technology churn, and massive economic shifts have made today's enterprise software delivery challenges radically different than those faced just three or four years ago. In this book, IBM Distinguished Engineer Alan W. Brown offers deep new insights into today's best approaches to enterprise software delivery. Brown guides decision-makers in choosing solutions that respond to their new challenges, and successfully anticipate what's coming next. He provides a compelling vision for 'software supply chains': one that can help software leaders create global software factories that successfully balance agility and efficiency. Brown illuminates today's new revolution in enterprise software delivery, focusing on key drivers for change, their impact on the day-to-day work of software engineers, and how enterprise software organizations are being reformed in response. He introduces the modern 'software factory' concept, addressing key trends including global outsourced teams, collaborative application lifecycle management, and cloud-based virtual infrastructures; Replete with examples, this informative, practical book will help organizations surface crucial issues they may have overlooked, and then identify and leverage the best new ways to deliver software. From start to finish, it offers powerful new opportunities to reduce costs, standardize processes, improve control and visibility, and become far more responsive to the business.

**Cloud Enterprise Architecture**

**Cloud Computing: Advanced Business and IT Strategies**

**Handbook of Research on Architectural Trends in Service-Driven Computing**

**Research Anthology on Architectures, Frameworks, and Integration Strategies for Distributed and Cloud Computing**

**Choosing the Best Cloud Adoption Strategy for Your Business**

**Rapid Technology Adoption for Digital Transformation**

The ubiquity of technology has not only brought the need for computer knowledge to every aspect of the modern business world; it has also increased our need to safely store the data we are now creating at a rate never experienced before. Delivery and Adoption of Cloud Computing Services in Contemporary Organizations brings together the best practices for storing massive amounts of data. Highlighting ways cloud services can work effectively in production and in real time, this book is an essential reference source for professionals and academics of various disciplines, such as computer science, consulting, information technology, information and communication sciences, healthcare, and finance.

The essential roadmaps for enterprise cloud adoption As cloud technologies continue to challenge the fundamental understanding of how businesses work, smart companies are moving quickly to adapt to a changing set of rules. Adopting the cloud requires a clear roadmap backed by use cases, grounded in practical real-world experience, to show the routes to successful adoption. The Cloud Adoption Playbook helps business and technology leaders in enterprise organizations sort through the options and make the best choices for accelerating cloud adoption

and digital transformation. Written by a team of IBM technical executives with a wealth of real-world client experience, this book cuts through the hype, answers your questions, and helps you tailor your cloud adoption and digital transformation journey to the needs of your organization. This book will help you: Discover how the cloud can fulfill major business needs Adopt a standardized Cloud Adoption Framework and understand the key dimensions of cloud adoption and digital transformation Learn how cloud adoption impacts culture, architecture, security, and more Understand the roles of governance, methodology, and how the cloud impacts key players in your organization. Providing a collection of winning plays, championship advice, and real-world examples of successful adoption, this playbook is your ultimate resource for making the cloud work. There has never been a better time to adopt the cloud. Cloud solutions are more numerous and accessible than ever before, and evolving technology is making the cloud more reliable, more secure, and more necessary than ever before. Don't let your organization be left behind! The Cloud Adoption Playbook gives you the essential guidance you need to make the smart choices that reduce your organizational risk and accelerate your cloud adoption and digital transformation.

The first-of-its-kind guide to making optimal, sustainable cloud adoption decisions for your enterprise. \* Shows how to optimize cloud adoption by aligning business and IT requirements, pain points, strengths, and inhibitors. \* Includes practical examples that clarify when cloud computing makes sense. \* Shows how to reduce risk and increase ROI by incorporating cloud services into existing enterprise architecture, and identifies architectural refinements to increase the cloud's value. This is the first complete guide to cloud decision-making for senior executives in both technology and non-technology roles. IBM Global Business Services Executive IT Architect Pamela K. Isom shows how to build on and extend existing Enterprise Architecture (EA) investments to maximize the value of the cloud. Drawing on her extensive experience working with enterprise clients to deliver high-value cloud solutions, Isom presents: \* Practical business cases, vignettes, and techniques to help both consumers and providers understand when cloud investments make sense. \* Litmus tests and decision trees for guiding cloud decision making. \* A clear explanation of why it's so important to reflect current Enterprise Architecture in cloud decision-making, and what happens when companies don't. \* Proven methods for incorporating cloud considerations into existing EAs. \* Guidance on identifying and prioritizing cloud enablement candidates and building adoption roadmaps. \* Potential EA refinements that help drive more value from the cloud. \* Illustrative examples of cloud deployments that minimize risk and optimize ROI Includes a foreword by IBM Fellow Kerrie Holley, co-inventor of Service-Oriented Modeling and Architecture (SOMA) and the Service Integration Maturity Model (SIMM).

There is an enhanced level of connectivity available in modern society through the increased usage of various technological devices. Such developments have led to the integration of smart objects into the Internet of Things (IoT), an emerging paradigm in the digital age. Game Theory Solutions for the Internet of Things: Emerging Research and Opportunities examines the latest strategies for the management of IoT systems and the application of theoretical models to enhance real-world applications and improve system efficiency. Highlighting innovative algorithms and methods, as well as coverage on cloud computing, cross-domain applications, and energy control, this book is a pivotal source of information for researchers, practitioners, graduate students, professionals, and academics interested in the game theoretic solutions for IoT applications.

Research Anthology on Telemedicine Efficacy, Adoption, and Impact on Healthcare Delivery

Enterprise Software Delivery

Cloud Computing... Commoditizing IT

Select Proceedings of ICEM 2020

Delivery and Adoption of Cloud Computing Services in Contemporary Organizations

**Cloud computing opens a broad range of business opportunities across the computing industry and enables companies in other industries to provide services to their employees, customers, and partners. Cloud computing provides a compelling approach to addressing this opportunity. The IBM® SmartCloud™ for Service Providers portfolio can dramatically lower the business and technical barriers of entry to cloud computing. Companies rely on their business applications and systems as an integral part of their business. They can expand the business value of their applications and systems by using cloud computing to enable delivery of these functions as services. Companies have various options when adopting cloud computing. They can: Use existing service providers to operate services on their behalf. Implement hybrid solutions that extend existing applications through integration with cloud services. Add cloud service hosting capability to their existing facilities. For ecosystem partners, cloud computing provides compelling capabilities that ease deployment and long term management and maintenance. Equally important, cloud computing facilitates a more flexible business and technical environment. This environment can expand, contract, and adapt as services are added, removed, and evolve. The cloud replaces physical activity associated with change and change management by creating a fluid environment that adapts through automation. This IBM Redguide™ publication describes the business and technology choices companies make when entering the cloud service provider space. It introduces various cloud service provider business models and shows how to apply them to your business. This guide introduces the IBM CCRA cloud service provider adoption pattern, providing guidance about the definition, architecture, and deployment of cloud computing environments. Two cloud service provider deployment scenarios are highlighted throughout the guide, and they reflect the two most common starting points for service providers entering the cloud computing marketplace. The guide culminates with details about these deployment scenarios, and showing how they can be deployed today.**

**This book captures the state of the art in cloud technologies, infrastructures, and service delivery and deployment models. The work provides guidance and case studies on the development of cloud-based services and infrastructures from an international selection of expert researchers and practitioners. Features: presents a focus on security and access control mechanisms for cloud environments, analyses standards and brokerage services, and investigates the role of certification for cloud adoption; evaluates cloud ERP, suggests a framework for implementing "big data" science, and proposes an approach for cloud interoperability; reviews existing elasticity management solutions, discusses the relationship between cloud management**

and governance, and describes the development of a cloud service capability assessment model; examines cloud applications in higher education, including the use of knowledge-as-a-service in the provision of education, and cloud-based e-learning for students with disabilities. Many aspects of modern life have become personalized, yet healthcare practices have been lagging behind in this trend. It is now becoming more common to use big data analysis to improve current healthcare and medicinal systems, and offer better health services to all citizens. Applying Big Data Analytics in Bioinformatics and Medicine is a comprehensive reference source that overviews the current state of medical treatments and systems and offers emerging solutions for a more personalized approach to the healthcare field. Featuring coverage on relevant topics that include smart data, proteomics, medical data storage, and drug design, this publication is an ideal resource for medical professionals, healthcare practitioners, academicians, and researchers interested in the latest trends and techniques in personalized medicine. Many companies move workloads to the cloud only to encounter issues with legacy processes and organizational structures. How do you design new operating models for this environment? This practical book shows IT managers, CIOs, and CTOs how to address the hardest part of any cloud transformation: the people and the processes. Author Mike Kavis (Architecting the Cloud) explores lessons learned from enterprises in the midst of cloud transformations. You'll learn how to rethink your approach from a technology, process, and organizational standpoint to realize the promise of cost optimization, agility, and innovation that public cloud platforms provide. Learn the difference between working in a data center and operating in the cloud Explore patterns and anti-patterns for organizing cloud operating models Get best practices for making the organizational change required for a move to the cloud Understand why site reliability engineering is essential for cloud operations Improve organizational performance through value stream mapping

**A Concise Guide to Cloud Computing**

**Impacts and Challenges of Cloud Business Intelligence**

**Delivering business-grade cloud applications and services**

**Applications for Healthcare Delivery, Management, and Quality**

**IBM SmartCloud: Becoming a Cloud Service Provider**

**Cloud Computing Applications for Quality Health Care Delivery**

This book is open access under a CC BY NC ND license. It addresses the most recent developments in cloud computing such as HPC in the Cloud, heterogeneous cloud, self-organising and self-management, and discusses the business implications of cloud computing adoption. Establishing the need for a new architecture for cloud computing, it discusses a novel cloud management and delivery architecture based on the principles of self-organisation and self-management. This focus shifts the deployment and optimisation effort from the consumer to the software stack running on the cloud infrastructure. It also outlines validation challenges and introduces a novel generalised extensible simulation framework to illustrate the effectiveness, performance and scalability of self-organising and self-managing delivery models on hyperscale cloud infrastructures. It concludes with a number of potential use cases for self-organising, self-managing clouds and the impact on those businesses. This book covers a practical approach for adopting and migrating on premises systems and applications to the Public Cloud. Based on a clear migration master plan, it helps companies and enterprises to be prepared for Cloud computing, what and how to successfully migrate or deploy systems on Cloud, preparing your IT organization with a sound Cloud Governance model, Security in the Cloud and how to reach the benefits of Cloud computing by automation and optimizing your cost and workloads.

The recent explosion of digital media, online networking, and e-commerce has generated great new opportunities for those Internet-savvy individuals who see potential in new technologies and can turn those possibilities into reality. It is vital for such forward-thinking innovators to stay abreast of all the latest technologies. Web-Based Services: Concepts, Methodologies, Tools, and Applications provides readers with comprehensive coverage of some of the latest tools and technologies in the digital industry. The chapters in this multi-volume book describe a diverse range of applications and methodologies made possible in a world connected by the global network, providing researchers, computer scientists, web developers, and digital experts with the latest knowledge and developments in Internet technologies.

As technology and technological advancements become a more prevalent and essential aspect of daily and business life, educational institutions must keep pace in order to maintain relevance and retain their ability to adequately prepare students for their lives beyond education. Such institutions and their leaders are seeking relevant strategies for the implementation and effective use of new and upcoming technologies and leadership strategies to best serve students and educators within educational settings. As traditional education methods become more outdated, strategies to supplement and bolster them through technology and effective management become essential to the success of institutions and programs. The Handbook of Research on Modern Educational Technologies, Applications, and Management is an all-encompassing two-volume scholarly reference comprised of 58 original and previously unpublished research articles that provide cutting-edge, multidisciplinary research and expert insights on advancing technologies used in educational settings as well as current strategies for administrative and leadership roles in education. Covering a wide range of topics including but not limited to community engagement, educational games, data management, and mobile learning, this publication provides insights into technological advancements with educational applications and examines forthcoming implementation strategies. These strategies are ideal for teachers, instructional designers, curriculum developers, educational software developers, and information technology specialists looking to promote effective learning in the classroom through cutting-edge learning technologies, new learning theories, and successful leadership tactics. Administrators, educational leaders, educational policymakers, and other education professionals will also benefit from this publication by utilizing the extensive research on managing educational institutions and providing valuable training and professional development initiatives as well as implementing the latest administrative technologies. Additionally, academicians, researchers, and students in areas that include but are not limited to educational technology, academic leadership, mentorship, learning environments, and educational support systems will benefit from the extensive research compiled within this publication.

**Game Theory Solutions for the Internet of Things: Emerging Research and Opportunities**

**The Cloud Adoption Playbook**

**Is Your Company Ready for Cloud?**

**Continued Rise of the Cloud**

### Ambient Communications and Computer Systems

time for a new approach, twelfth report of session 2010-11, Vol. 2: Oral and written evidence

The Executive's Strategic Guide to Driving Maximum Business Value from Cloud Services Cloud services represent a fundamental shift in how individuals, enterprises, and governments conduct business, interact, and use technology. If used effectively, they can increase business agility and focus, simplify capacity planning, and strengthen cost control. Unsurprisingly, however, the cloud also presents risks. In this concise, executive level book, leading experts Archie Reed and Stephen G. Bennet share the insights and guidance decision-makers need to drive maximum value from cloud services--and avoid the pitfalls. The authors explain what cloud computing is, how it works, who provides cloud services, and how companies are using them. Next, they walk through the entire cloud lifecycle, offering expert guidance on planning, governance, compliance, security, operations, administration, management, and more. You'll learn how to:

- Assess the opportunities, benefits, and risks of cloud services in your environment
- Use the cloud to improve processes, accelerate system/product delivery, or create entirely new products and businesses
- Approach the cloud strategically (and learn why you should)
- Understand cloud infrastructure, operations, and standards from the decision-maker's point of view
- Build on existing solution architecture, design practices, and SOA investments
- Ensure appropriate control, monitoring, compliance, and security
- Use IT process standardization to simplify cloud services management
- Define a flexible roadmap that enables multiple projects to move forward in parallel, and can change as the marketplace evolves

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Designing Networks and Services for the Cloud Delivering business-grade cloud applications and services A rapid, easy-to-understand approach to delivering a secure, resilient, easy-to-manage, SLA-driven cloud experience Designing Networks and Services for the Cloud helps you understand the design and architecture of networks and network services that enable the delivery of business-grade cloud services. Drawing on more than 40 years of experience in network and cloud design, validation, and deployment, the authors demonstrate how networks spanning from the Enterprise branch/HQ and the service provider Next-Generation Networks (NGN) to the data center fabric play a key role in addressing the primary inhibitors to cloud adoption--security, performance, and management complexity. The authors first review how virtualized infrastructure lays the foundation for the delivery of cloud services before delving into a primer on clouds, including the management of cloud services. Next, they explore key factors that inhibit enterprises from moving their core workloads to the cloud, and how advanced networks and network services can help businesses migrate to the cloud with confidence. You'll find an in-depth look at data center networks, including virtualization-aware networks, virtual network services, and service overlays. The elements of security in a virtual, fluid environment are discussed, along with techniques for optimizing and accelerating the service delivery. The book delves deeply into cloud-aware service provider NGNs and their role in flexibly connecting distributed cloud resources, ensuring the security of provider and tenant resources, and enabling the optimal placement of cloud services. The role of Enterprise networks as a critical control point for securely and cost-effectively connecting to high-performance cloud services is explored in detail before various parts of the network finally come together in the definition and delivery of end-to-end cloud SLAs. At the end of the journey, you preview the exciting future of clouds and network services, along with the major upcoming trends. If you are a technical professional or manager who must design, implement, or operate cloud or NGN solutions in enterprise or service-provider environments, this guide will be an indispensable resource.

- \* Understand how virtualized data-center infrastructure lays the groundwork for cloud-based services
- \* Move from distributed virtualization to "IT-as-a-service" via automated self-service portals
- \* Classify cloud services and deployment models, and understand the actors in the cloud ecosystem
- \* Review the elements, requirements, challenges, and opportunities associated with network services in the cloud
- \* Optimize data centers through network segmentation, virtualization-aware networks, virtual network services, and service overlays
- \* Systematically secure cloud services
- \* Optimize service and application performance
- \* Plan and implement NGN infrastructure to support and accelerate cloud services
- \* Successfully connect enterprises to the cloud
- \* Define and deliver on end-to-end cloud SLAs
- \* Preview the future of cloud and network services

Telemedicine, which involves electronic communications and software, provides the same clinical services to patients without the requirement of an in-person visit. Essentially, this is considered remote healthcare. Though telemedicine is not a new practice, it has become an increasingly popular form of healthcare delivery due to current events, including the COVID-19 pandemic. Not only are visits being moved onto virtual platforms, but additional materials and correspondence can remain in the digital sphere. Virtual lab results, digital imaging, medical diagnosis, and video consultations are just a few examples that encompass how telemedicine can be used for increased accessibility in healthcare delivery. With telemedicine being used in both the diagnosis and treatment of patients, technology in healthcare can be implemented at almost any phase of the patient experience. As healthcare delivery follows the digital shift, it is important to understand the technologies, benefits and challenges, and overall impacts of the remote healthcare experience. The Research Anthology on Telemedicine Efficacy, Adoption, and Impact on Healthcare Delivery presents the latest research on best practices for adopting telehealth into medical practices and its efficacy and solutions for the improvement of telemedicine, as well as addresses emerging challenges and opportunities, including issues such as securing patient data and providing healthcare accessibility to rural populations. Covering important themes that include doctor-patient relationships, tele-wound monitoring, and telemedicine regulations, this book is essential for healthcare professionals, doctors, medical students, academic and medical libraries, medical technologists, practitioners, stakeholders, researchers, academicians, and students interested in the emerging technological developments and solutions within the field of telemedicine.

Medical practitioners are continuing to advance their knowledge of the latest technologies in order to keep up with the opportunities for faster and more reliable treatments for patients. Advancing Medical Practice through Technology: Applications in Healthcare Delivery, Management, and Quality focuses on the latest medical practices through the utilization of technologies and innovative concepts. This book is an essential reference source for researchers, academics, and industry professionals interested in the latest advancements in the healthcare, biomedicine, and medical communications fields.

Handbook of Research on Modern Educational Technologies, Applications, and Management

The Innovator's Imperative

Silver Clouds, Dark Linings

Cloud Computing... Commoditizing It: The Imperative Venture for Every Enterprise

To the Cloud: Cloud Powering an Enterprise

Software Engineering in the Era of Cloud Computing

This text provides decision makers with the insight and practical tools they need to make intelligent decisions about cloud computing and manage an effective migration to this new paradigm.

Research into the next generation of service architecture techniques has enabled the design, development, and implementation of dynamic, adaptive, and autonomic services to enable enterprises to efficiently align information technology with their agile business requirements and foster smart services and seamless enterprise integration. Handbook of Research on Architectural Trends in Service-Driven Computing explores, delineates, and discusses recent advances in architectural methodologies and development techniques in service-driven computing. This comprehensive publication is an inclusive reference source for organizations, researchers, students, enterprise and integration architects, practitioners, software developers, and software engineering professionals engaged in the research, development, and integration of the next generation of computing.

Achieve streamlined, rapid production with enterprise-level DevOps Awarded DevOps 2017 Book of the Year, The DevOps Adoption Playbook provides practical, actionable, real-world guidance on implementing DevOps at enterprise scale. Author Sanjeev Sharma heads the DevOps practice for IBM; in this book, he provides unique guidance and insight on implementing DevOps at large organizations. Most DevOps literature is aimed at startups, but enterprises have unique needs, capabilities, limitations, and challenges; "DevOps for startups" doesn't work at this scale, but the DevOps paradigm can revolutionize enterprise IT. Deliver high-value applications and systems with velocity and agility by adopting the necessary practices, automation tools, and organizational and cultural changes that lead to innovation through rapid experimentation. Speed is an advantage in the face of competition, but it must never come at the expense of quality; DevOps allows your organization to keep both by intersecting development, quality assurance, and operations. Enterprise-level DevOps comes with its own set of challenges, but this book shows you just how easily they are overcome. With a slight shift in perspective, your organization can stay ahead of the competition while keeping costs, risks, and quality under control. Grasp the full extent of the DevOps impact on IT organizations Achieve high-value innovation and optimization with low cost and risk Exceed traditional business goals with higher product release efficiency Implement DevOps in large-scale enterprise IT environments DevOps has been one of IT's hottest trends for the past decade, and plenty of success stories testify to its effectiveness in organizations of any size, industry, or level of IT maturity, all around the world. The DevOps Adoption Playbook shows you how to get your organization on board so you can slip production into the fast lane and innovate your way to the top.

Cloud Computing is the IT services delivery model of the near future. The problem is, there are very few experts that have hands-on understanding of its competitive and organizational impacts. The vast majority of books address the technical details of cloud, but few emphasize its implementation and deployment at the scale of the enterprise. This book provides the models, concepts, and methodologies you need to be successful in your organization's transition to cloud. Through his 23-year IT Transformation background, Philippe Abdoulaye brings a project-oriented approach to cloud transition, with several techniques needed to accelerate adoption of cloud services. The book begins with a definition of the competitive perspective of cloud, provides insights into the cloud-oriented business model, and details through a complete business an agile approach to cloud transition addressing issues as critical IT operating model transformation, SaaS application architecting, and datacenter transformation.

Advances in Enterprise Information Systems II

Cloud Computing Economics For Information Technology industry

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Proven Strategies for Transforming Your Organization with the Cloud