Systems Performance Enterprise And The Cloud Brendan Gregg

This book contains the refereed proceedings of the 4th International Conference on Lean Enterprise Software and Systems, LESS 2013, held in Galway, Ireland, in December 2013. LESS fosters interactions between practitioners and researchers by joining the lean product development and the agile software development communities in a highly collaborative environment. Each year, the program combines novelties and recent research results that make new ideas thrive during and after the conference. This year, the conference agenda was expanded to incorporate topics such as portfolio management, open innovation and enterprise transformation. The 14 papers selected for this book represent a diverse range of experiences, studies and theoretical achievements. They are organized in four sections on lean software development, quality and performance, case studies and emerging developments.

New technologies are revolutionising the way manufacturing and supply chain management are implemented. These changes are delivering manufacturing firms the competitive advantage of a highly flexible and responsive supply chain and manufacturing system to ensure that they meet the

high expectations of their customers, who, in today's economy, demand absolutely the best service, price, delivery time and product quality. To make e-manufacturing and supply chain technologies effective, integration is needed between various, often disparate systems. To understand why this is such an issue, one needs to understand what the different systems or system components do, their objectives, their specific focus areas and how they interact with other systems. It is also required to understand how these systems evolved to their current state, as the concepts used during the early development of systems and technology tend to remain in place throughout the life-cycle of the systems/technology. This book explores various standards, concepts and techniques used over the years to model systems and hierarchies in order to understand where they fit into the organization and supply chain. It looks at the specific system components and the ways in which they can be designed and graphically depicted for easy understanding by both information technology (IT) and non-IT personnel. Without a good implementation philosophy, very few systems add any real benefit to an organization, and for this reason the ways in which systems are implemented and installation projects managed are also explored and recommendations are made as to possible methods that have proven successful in the past.

The human factor and how that impacts on system success are also addressed, as is the motivation for system investment and subsequent benefit measurement processes. Finally, the vendor/user supply/demand within the e-manufacturing domain is explored and a method is put forward that enables the reduction of vendor bias during the vendor selection process. The objective of this book is to provide the reader with a good understanding regarding the four critical factors (business/physical processes, systems supporting the processes, company personnel and company/personal performance measures) that influence the success of any e-manufacturing implementation, and the synchronization required between these factors. · Discover how to implement the flexible and responsive supply chain and manufacturing execution systems required for competitive and customer-focused manufacturing · Build a working knowledge of the latest plant automation, manufacturing execution systems (MES) and supply chain management (SCM) design techniques · Gain a fuller understanding of the four critical factors (business and physical processes, systems supporting the processes, company personnel, performance measurement) that influence the success of any e-manufacturing implementation, and how to evaluate and optimize all four factors Structured to follow the software life cycle, Patterns

for Performance and Operability provides advice and
examples-based instructions at every phase. You
can read it from start to finish or go directly to those
chapters that interest you the most. Whatever
approach you choose, you will learn: How to: ·
Define and document comprehensive non-functional
requirements for any software system · Define scope
and logistics for non-functional test activities ·
Execute non-functional tests and report results
clearly and effectively · Patterns for defensive
software designs in common software scenarios that
promote operability and availability · Implement the
right level of reporting, monitoring, and trending for
highly available production software systems
Patterns for: · Software designs that support simpler
and more efficient operation in a production
environment · Software design that support high-
performance and scalability Strategies and
Techniques for: · Techniques for managing and
troubleshooting during a production crisis ·
Strategies for resisting project pressure to
compromise on quality or completeness of non-
functional activities in the software cycle
This book presents, as a how-to guide, a compelling
methodology for improving the operational and
financial performance of a firm. The book focuses on
the optimum utilization of capital assets and human
resources to support the firm's business strategy
and, therefore, gain a competitive advantage. It

complements publications on the Balanced Scorecard by providing rather detailed sets of performance metrics applicable to Supply Chain, Customer Relationship Management, and Intellectual Capital improvement efforts. Managers involved in business improvement programs will benefit from the development of performance metrics for intellectual capital. MBA students will find especially useful the concise description of the best practices and issues affecting enterprise performance today. Reviews Finally, consideration for non-financial assets handled in a non-financial manner. A coming together of several current management concepts, along with a way to measure and evaluate their value to the company. A useful reference for building, implementing and evaluating a plan of improved efficiency. L. Sehr RA/AVP, Bank of America, San Jose, California This book provides a good overview of important financial and process redesign concepts that can influence business performance. This resource covers a broad range of ideas from continuous improvement, business strategies, balanced scorecards and value measurement tools. Non-financial persons will find this especially helpful, as information is presented in a non-technical manner, a quick read and intuitively links each idea or concept. David Bell Senior Manager, Guidant, Inc., Santa Clara, California The High Performance Enterprise is written in a very

readable and concise language. The authors manage to explain in a very direct way the relationship between enterprise high performance and each of the four steps to achieving it; all this, without getting bogged down with the details on specific techniques and practices that are generally known in the industry. The discussion stays focused on the importance of metrics and simulation and their link to overall financial/accounting concepts that gauge the value of the enterprise and its performance. Because the book touches on, and gives examples of, all major functional aspects of an enterprise, I would recommend it for use in an undergraduate strategic management or capstone course in business administration program. The book would be particularly useful in an MBA course. George Guim Ed.D. Head of Business Administration Department The National Hispanic University, San Jose, California

A collection of 24 humorous mountain man tall tales, these stories are narrated in a loose kind of verse in the voice of a tough and experienced early-19th-century Rocky Mountain fur trapper. While a few of the tales are retellings of whoppers by famous historical mountain men, most are original outrageous lies of the author's own, related in the mountaineer tradition. All of the stories contain glimpses of the difficult, dangerous life of that rowdy breed of men who challenged the uncharted

wilderness and triumphed because of their courage, fortitude, and unquenchable laughter in the face of hardship and peril.

How well does your organization respond to changing market conditions, customer needs, and emerging technologies when building software-based products? This practical guide presents Lean and Agile principles and patterns to help you move fast at scale—and demonstrates why and how to apply these paradigms throughout your organization, rather than with just one department or team. Through case studies, you'll learn how successful enterprises have rethought everything from governance and financial management to systems architecture and organizational culture in the pursuit of radically improved performance. Discover how Lean focuses on people and teamwork at every level, in contrast to traditional management practices Approach problem-solving experimentally by exploring solutions, testing assumptions, and getting feedback from real users Lead and manage large-scale programs in a way that empowers employees, increases the speed and quality of delivery, and lowers costs Learn how to implement ideas from the DevOps and Lean Startup movements even in complex, regulated environments Application Performance Management (APM) in the Digital Enterprise enables IT professionals to be more successful in managing their company's

applications. It explores the fundamentals of application management, examines how the latest technological trends impact application management, and provides best practices for responding to these changes. The recent surge in the use of containers as a way to simplify management and deploy applications has created new challenges, and the convergence of containerization, cloud, mobile, virtualization, analytics, and automation is reshaping the requirements for application management. This book serves as a guide for understanding these dramatic changes and how they impact the management of applications, showing how to create a management strategy, define the underlying processes and standards, and how to select the appropriate tools to enable management processes. Offers a complete framework for implementing effective application management using clear tips and solutions for those responsible for application management Draws upon primary research to give technologists a current understanding of the latest technologies and processes needed to more effectively manage large-scale applications Includes real-world case studies and business justifications that support application management investments

Agile has the power to transform work--but only if it's implemented the right way. For decades business leaders have been painfully aware of a huge chasm:

They aspire to create nimble, flexible enterprises. But their day-to-day reality is silos, sluggish processes, and stalled innovation. Today, agile is hailed as the essential bridge across this chasm, with the potential to transform a company and catapult it to the head of the pack. Not so fast. In this clear-eyed, indispensable book, Bain & Company thought leader Darrell Rigby and his colleagues Sarah Elk and Steve Berez provide a much-needed reality check. They dispel the myths and misconceptions that have accompanied agile's rise to prominence--the idea that it can reshape an organization all at once, for instance, or that it should be used in every function and for all types of work. They illustrate that agile teams can indeed be powerful, making people's jobs more rewarding and turbocharging innovation, but such results are possible only if the method is fully understood and implemented the right way. The key, they argue, is balance. Every organization must optimize and tightly control some of its operations, and at the same time innovate. Agile, done well, enables vigorous innovation without sacrificing the efficiency and reliability essential to traditional operations. The authors break down how agile really works, show what not to do, and explain the crucial importance of scaling agile properly in order to reap its full benefit. They then lay out a road map for leading the transition to a truly agile enterprise. Agile isn't a goal

in itself; it's a means to becoming a high-performance operation. Doing Agile Right is a must-have guide for any company trying to make the transition--or trying to sustain high agility. Learn how Lean IT can help companies deliver better customerservice and value Lean Enterprise Systems effectively demonstrates how the techniquesderived from Lean Manufacturing, combined with the thoughtfulapplication of information technology, can help all enterprisesimprove business performance and add significant value for theircustomers. The author also demonstrates how the basic concepts ofLean Manufacturing can be applied to create agile and responsiveLean IT. The book is divided into three parts that collectively explore howpeople, processes, and technology combine forces to facilitatecontinuous improvement: * Part One: Building Blocks of the Lean Enterprise sets forth theessentials of Lean. Readers discover where, when, and how Lean ITadds substantial value to the Lean Enterprise through integratedprocesses of planning, scheduling, execution, control, and decisionmaking across the full spectrum of operations. * Part Two: Building Blocks of Information Systems explores theprimary components of an enterprise information system and howthese components may be integrated to improve the flow ofinformation supporting value streams.

Readers learn how informationsystems help organize and deliver knowledge when and where it'sneeded. * Part Three: Managing Change with IT demonstrates how the skillfulcombination of process and information technology improvementsempowers people to continuously improve the Lean Enterprise.Readers develop the skills to exploit emerging informationtechnology tools and change management methods, crafting a Lean ITframework-reducing waste, complexity, and lead time-while addingmeasurable value. Executives, managers, and improvement teams across a broad range ofindustries, as well as IT professionals, can apply the techniquesdescribed in this publication to improve performance, add value,and create competitive advantage. The book's clear style andpractical focus also makes it an excellent textbook for upper-levelundergraduate and graduate courses in business, operationsmanagement, and business information systems.

Digitising Enterprise in an Information Age is an effort that focuses on a very vast cluster of Enterprises and their digitising technology involvement and take us through the road map of the implementation process in them, some of them being ICT, Banking, Stock Markets, Textile Industry & ICT, Social Media, Software Quality Assurance, Information Systems Security and Risk Management, Employee Resource Planning etc. It delves on increased instances of cyber spamming and

the threat that poses to e-Commerce and Banking and tools that help and Enterprise toward of such threats. To quote Confucius, "As the water shapes itself to the vessel that contains it, so does a wise man adapts himself to circumstances." And the journey of evolution and progression will continue and institutions and enterprises will continue to become smarter and more and more technology savvy. Enterprises and businesses across all genre and spectrum are trying their level best to adopt to change and move on with the changing requirements of technology and as enterprises and companies upgrade and speed up their digital transformations and move their outdate heirloom systems to the cloud, archaic partners that don't keep up will be left behind. Note: T&F does not sell or distribute the Hardback in India, Pakistan, Nepal, Bhutan, Bangladesh and Sri Lanka.

Enterprise Level Security: Securing Information Systems in an Uncertain World provides a modern alternative to the fortress approach to security. The new approach is more distributed and has no need for passwords or accounts. Global attacks become much more difficult, and losses are localized, should they occur. The security approach is derived fro

The role of the information systems auditor is not just about compliance and performance testing but goes beyond by adding value to the enterprise through being an IS advisor to management. This book, whilst covering all the necessary skills in IS auditing, also focuses on the role of the IS auditor in enhancing the performance of the enterprise. The IS auditor is a key member of the

enterprise and ensures that technology is used appropriately, protects data, and provides a secure environment. The book outlines the IS audit process in detail, enabling the reader to acquire necessary skills on how to conduct an IS audit. Included in the book are other formative skills, such as IT general controls, applications controls, IT governance, information security, IT risk, and disaster recovery. The book also covers all the necessary technologies an IS auditor requires to learn and understand in order to be an effective auditor. A good flair for technology is a must for one to be a good IS auditor. The book focuses on both learning the technology and developing appropriate evidence-gathering skills.

Discusses the main issues, challenges, opportunities, and trends related to the impact of IT on every part of organizational and inter-organizational environments. This is a story of reinvention. Jim Whitehurst, celebrated president and CEO of one of the world's most revolutionary software companies, tells first-hand his journey from traditional manager (Delta Air Lines, Boston Consulting Group) and "chief" problem solver to CEO of one of the most open organizational environments he'd ever encountered. This challenging transition, and what Whitehurst learned in the interim, has paved the way for a new way of managing—one this modern leader sees as the only way companies will successfully function in the future. Whitehurst says beyond embracing the technology that has so far disrupted entire industries, companies must now adapt their management and organizational design to better fit the Information Age.

His mantra? "Adapt or die." Indeed, the successful company Whitehurst leads—the open source giant Red Hat—has become the organizational poster child for how to reboot, redesign, and reinvent an organization for a decentralized, digital age. Based on open source principles of transparency, participation, and collaboration, "open management" challenges conventional business ideas about what companies are, how they run, and how they make money. This book provides the blueprint for putting it into practice in your own firm. He covers challenges that have been missing from the conversation to date, among them: how to scale engagement; how to have healthy debates that net progress; and how to attract and keep the "Social Generation" of workers. Through a mix of vibrant stories, candid lessons, and tested processes, Whitehurst shows how Red Hat has blown the traditional operating model to pieces by emerging out of a pure bottom up culture and learning how to execute it at scale. And he explains what other companies are, and need to be doing to bring this open style into all facets of the organization. By showing how to apply open source methods to everything from structure, management, and strategy to a firm's customer and partner relationships, leaders and teams will now have the tools needed to reach a new level of work. And with that new level of work comes unparalleled success. The Open Organization is your new resource for doing business differently. Get ready to make traditional management thinking obsolete. Is your organization rapidly accumulating more information than you know how to manage? This

updated edition of Enterprise Search helps you create an enterprise search solution based on more than just technology. Author Martin White shows you how to plan and implement a managed search environment that meets the needs of your business and your employees. You'll learn why it's absolutely vital to have a dedicated staff manage your search technology and support your users. New material for this second edition includes material on SharePoint 2013 search, managing open source search development, website search, designing the search user, and assessing search performance. Chapters now include a Further Reading section for computer science and information science students. Topics include: 10 critical success factors to assess organizational search maturity Essential skills needed to support a successful search application How to specify and manage open source search development How to manage SharePoint 2013 search Methods to assess the business impact of search Best practices in user interface design The importance of search for websites What to include in a search strategy

Enterprise Integration Patterns provides an invaluable catalog of sixty-five patterns, with real-world solutions that demonstrate the formidable of messaging and help you to design effective messaging solutions for your enterprise. The authors also include examples covering a variety of different integration technologies, such as JMS, MSMQ, TIBCO ActiveEnterprise, Microsoft BizTalk, SOAP, and XSL. A case study describing a bond trading system illustrates the patterns in practice, and the book offers a look at emerging standards, as well as insights

into what the future of enterprise integration might hold. This book provides a consistent vocabulary and visual notation framework to describe large-scale integration solutions across many technologies. It also explores in detail the advantages and limitations of asynchronous messaging architectures. The authors present practical advice on designing code that connects an application to a messaging system, and provide extensive information to help you determine when to send a message, how to route it to the proper destination, and how to monitor the health of a messaging system. If you want to know how to manage, monitor, and maintain a messaging system once it is in use, get this book. What is this book about? Professional Red Hat Enterprise Linux 3 is a complete professional guide to setting up, configuring, and deploying Red Hat Enterprise Linux in the corporate production environment. The book focuses on Enterprise Server and Advanced Server features, including the key areas of high availability with the Red Hat Cluster Suite, Red Hat Network Control Center, and Red Hat Enterprise applications such as the Content Management System and portal server. Other key unique features include kernel tuning for various performance profiles; advanced Apache configuration; Tux installation/maintenance; building high-performance FTP servers; building high-performance mail servers (which means replacing Sendmail); Mailing list management; how to efficiently add, remove, or modify 100 users at the same time; and a discussion of disk quota management and monitoring. What does this book cover? The key features of the book

include the following: How to install and setup RHEL 3 How to deploy RHEL 3 in production environment How to manage an RHEL system using Perl and shell scripting Advanced administration tools How to use Red Hat network service Details on installation and setup of security tools Ability to use and deploy High Availability solutions provided with RHEL 3 Performance tuning How to use monitoring tools Ability to use RHEL to provide scalable infrastructure solutions.

This is the first book to seriously address the disconnection between nimble Agile teams and other groups in the enterprise, including enterprise architecture, the program management office (PMO), human resources, and even business executives. When an enterprise experiments with practice improvements, software development teams often jump on board with excitement, while other groups are left to wonder how they will fit in. We address how these groups can adapt to Agile teams. More importantly, we show how many Agile teams cause their own problems, damaging scalability and sustainability, by requiring special treatment, and by failing to bridge the gaps between themselves and other groups. We call this phenomenon "Agile illth." Adopting a set of "best practices" is not enough. All of us, Agile teams and the corporate groups, must change our intentions and worldviews to be more compatible with the success of the enterprise. Join us on the journey to enterprise agility. It is a crooked path, fraught with danger, confusion and complexity. It is the only way to reach the pinnacles we hope to experience in the form of better business value delivered faster for

less cost.

The convergence of knowledge, technology, and human performance which comprises today's enterprise allows creative business process design. Thus, an organization can create new and innovative ways to service customers or to do business with suppliers and make itself a leader in its field. This capability relies on a successful strategy that integra "International Institute for Analytics"--Dust jacket.

Systems performance analysis and tuning lead to a better end-user experience and lower costs, especially for cloud computing environments that charge by the OS instance. Systems Performance, 2nd Edition covers concepts, strategy, tools, and tuning for operating systems and applications, using Linux-based operating systems as the primary example. World-renowned systems performance expert Brendan Gregg summarizes relevant operating system, hardware, and application theory to quickly get professionals up to speed even if they've never analyzed performance before, and to refresh and update advanced readers' knowledge. Gregg illuminates the latest tools and techniques, including extended BPF, showing how to get the most out of your systems in cloud, web, and large-scale enterprise environments. He covers these and other key topics: Hardware, kernel, and application internals, and how they perform Methodologies for rapid performance analysis of complex systems Optimizing CPU, memory, file system, disk, and networking usage Sophisticated profiling and tracing with perf, Ftrace, and BPF (BCC and bpftrace) Performance challenges associated with cloud computing hypervisors Benchmarking more effectively Fully updated for current Linux operating systems and environments, Systems Performance, 2nd Edition addresses issues that apply to any computer system. The book will be a go-to reference for

many years to come and recommended reading at many tech companies, like its predecessor first edition.

The Integrated Enterprise Excellence (IEE) system is a set of management techniques that innovatively builds on practices derived from the strengths of past systems--applying structured metrics and a no-nonsense roadmap to initiate process improvement and achieve predictable and sustainable bottom-line benefits.

In practice, many different people with backgrounds in many different disciplines contribute to the design of an enterprise. Anyone who makes decisions to change the current enterprise to achieve some preferred structure is considered a designer. What is problematic is how to use the knowledge of separate aspects of the enterprise to achieve a glob

Systems PerformanceEnterprise and the CloudPearson Education

This book shows software professionals exactly how to build high-performance, high-integrity distributed Transaction Processing (TP) systems for e-commerce, and other business-critical applications. For each product, Gorton presents in-depth coverage of system architecture, TP monitor management environments, and programming models, and walks through a complete sample application illustrating both TP monitor features and relevant programming APIs.

Addresses the field of enterprise systems, covering progressive technologies, leading theories, and advanced applications.

The Definitive Guide to SUSE Linux Enterprise Server 12 is a task-oriented book designed for self-study as well as classroom environments, which will also serve you as a reference guide. The book covers all skills that system administrators typically need to posses to administer SUSE Linux Enterprise Server in corporate environments. It starts at the beginning, which makes The Definitive Guide to SUSE

Linux Enterprise Server 12 suitable for people without any preliminary Linux knowledge, and yet works up to advanced SUSE Linux administration tasks, such as building a cluster, optimizing performance or managing SUSE Linux Enterprise Server with SUSE Manager. The Definitive Guide to SUSE Linux Enterprise Server 12 is an ideal reference guide for system administrators, but is also perfect as a study book to prepare for the CLA, CLP as well as the CLE exams. This book contains step-by-step exercises, and scenario based exercises at the end of each chapter to help readers getting familiar with the subjects that are required to pass these three exams. The Definitive Guide to SUSE Linux Enterprise Server 12also contains test exams, so you can use it as a study guide in a formal learning environment or as a book that you can learn and test your own progress as you master SUSE Linux Enterprise Server. You'll learn everything you need to know and the skills you need to manage SUSE Linux Enterprise Servers, from installing a secure server, to performing the day-to-day management tasks on SUSE Linux Enterprise Server. Along the way you'll encounter and master SUSE Linux Enterprise Server in a data center environment, how to manage your SUSE Enterprise Server for High Availability, and you'll see how to manage your SUSE Linux Enterprise Server with SUSE Manager. From installation to expert management, The Definitive Guide to SUSE Linux Enterprise Server 12 will show you the ways to succeed with Linux Enterprise Server 12.
Over 60 recipes to help you build, configure, and orchestrate RHEL 7 Server to make your everyday administration experience seamless About This Book Create fully unattended installations and deploy configurations without breaking a sweat Discover and kick-start the newest RHEL 7 configuration and

management tools through an easy-to-follow, practical approach for a lazy system management Be guided by an experienced RHEL expert who is a certified Linux engineer with a passion for open source and open standards Who This Book Is For Red Hat Enterprise Linux Server Cookbook is for RHEL 7 system administrators and DevOps in need of a practical reference guide to troubleshoot common issues and quickly perform tasks. What You Will Learn Set up and configure RHEL 7 Server Use NetworkManager to configure all aspects of your network Manage virtual environments using libvirt Set up software repositories Secure and monitor your RHEL environment Configure SELinux, and create and apply its policies Create kickstart scripts to automatically deploy RHEL 7 systems Use Orchestration and configuration management tools to manage your environment In Detail Dominating the server market, the Red Hat Enterprise Linux operating system gives you the support you need to modernize your infrastructure and boost your organization's efficiency. Combining both stability and flexibility, RHEL helps you meet the challenges of today and adapt to the demands of tomorrow. This practical Cookbook guide will help you get to grips with RHEL 7 Server and automating its installation. Designed to provide targeted assistance through hands-on recipe guidance, it will introduce you to everything you need to know about KVM guests and deploying multiple standardized RHEL systems effortlessly. Get practical reference advice that will make complex networks setups look like child's play, and dive into in-depth coverage of configuring a RHEL system.

Also including full recipe coverage of how to set up, configuring, and troubleshoot SELinux, you'll also discover how secure your operating system, as well as how to monitor it. Style and approach This practical guide is packed full of hands-on recipes that provide quick solutions to the problems faced when building your RHEL 7 system from scratch using orchestration tools. Each topic is explained sequentially in the process of setting up a system and binding everything together. Poorly performing enterprise applications are the weakest links in a corporation's management chain, causing delays and disruptions of critical business functions. This groundbreaking book frames enterprise application performance engineering not as an art but as applied science built on model-based methodological foundation. The book introduces queuing models of enterprise application that visualize, demystify, explain, and solve system performance issues. Analysis of these models will help to discover and clarify unapparent connections and correlations among workloads, hardware architecture, and software parameters. This book presents an integrated systems approach to manufacturing and business enterprise. Traditionally, these topics are treated as separate and independent subjects, but the practical fact is that the manufacturing and the business enterprises are intertwined. Currently, there is no book on the market that addresses both subjects from an integrated systems engineering approach with a manufacturing engineering foundation. Topics covered include engineering process, systems modeling, business enterprise, forecasting, inventory

management, product design, and project management. Features Provides in-depth treatment of modern manufacturing processes, systems, and tools Uses an integrated systems life-cycle approach to manufacturing and business Includes business proposals Discusses prototype manufacturing and/or business development processes Presents concepts, steps, and procedures for achieving an integrated enterprise of manufacturing and business

A workable blueprint for developing and implementing performancemanagement in order to improve revenue growth and profitmargins Enterprise performance management (EPM) technology has beenrapidly advancing, especially in the areas of predictive analysisand cloud-based solutions. Real Enterprise PerformanceManagement introduces a framework for implementing and managingnext-generation functionality for better insight, focus, andalignment of EPM. This blueprint shows that EPM can have a directpositive impact on revenue growth, operating margin, assetutilization, and cash cycle efficiency. Introduces a framework for implementing and managingnext-generation functionality for better insight, focus, andalignment Reveals that EPM can have a strong impact on revenue growth,operating margin, asset utilization, cash cycle efficiency Today's businesses have a great deal of data and technology, butless-than-fact decisions are still made. Executives need astructured framework for gathering, analyzing, and debating thebest ways to deploy capital, people and time. Real EnterprisePerformance Management joins IT

and finance in a digestibleblueprint for developing and implementing performance management inorder to improve revenue growth and profit margins. "Large-scale enterprise, cloud, and virtualized computing systems have introduced serious performance challenges. Now, internationally renowned performance expert Brendan Gregg has brought together proven methodologies, tools, and metrics for analyzing and tuning even the most complex environments. Systems Performance: Enterprise and the Cloud focuses on Linux® and Unix® performance, while illuminating performance issues that are relevant to all operating systems. You'll gain deep insight into how systems work and perform, and learn methodologies for analyzing and improving system and application performance. Gregg presents examples from bare-metal systems and virtualized cloud tenants running Linux-based Ubuntu®, Fedora®, CentOS, and the illumos-based Joyent® SmartOSTM and OmniTI OmniOS®. He systematically covers modern systems performance, including the "traditional" analysis of CPUs, memory, disks, and networks, and new areas including cloud computing and dynamic tracing. This book also helps you identify and fix the "unknown unknowns" of complex performance: bottlenecks that emerge from elements and interactions you were not aware of. The text concludes with a detailed case study, showing how a real cloud customer issue was analyzed from start to finish."--Back cover. Innovation principles to bring about meaningful and sustainablegrowth in your organization Using a list of more than 2,000 successful innovations,including Cirque

du Soleil, early IBM mainframes, the Ford Model-T,and many more, the authors applied a proprietary algorithm anddetermined ten meaningful groupings—the Ten Types ofInnovation—that provided insight into innovation. The TenTypes of Innovation explores these insights to diagnosepatterns of innovation within industries, to identify innovationopportunities, and to evaluate how firms are performing againstcompetitors. The framework has proven to be one of the mostenduring and useful ways to start thinking abouttransformation. Details how you can use these innovation principles to bringabout meaningful—and sustainable—growth within yourorganization Author Larry Keeley is a world renowned speaker, innovationconsultant, and president and co-founder of Doblin, the innovationpractice of Monitor Group; BusinessWeek named Keeley one of sevenInnovation Gurus who are changing the field The Ten Types of Innovation concept has influenced thousands ofexecutives and companies around the world since its discovery in1998. The Ten Types of Innovation is the first bookexplaining how to implement it. In the race to compete in today's fast-moving markets, large enterprises are busy adopting new technologies for creating new products, processes, and business models. But one obstacle on the road to digital transformation is placing too much emphasis on technology, and not enough on the types of processes technology enables. What if different lines of business could build their own services and applications—and decision-making was distributed rather than centralized? This report explores the concept of a digital business platform as a way of

empowering individual business sectors to act on data in real time. Much innovation in a digital enterprise will increasingly happen at the edge, whether it involves business users (from marketers to data scientists) or IoT devices. To facilitate the process, your core IT team can provide these sectors with the digital tools they need to innovate quickly. This report explores: Key cultural and organizational changes for developing business capabilities through cross-functional product teams A platform for integrating applications, data sources, business partners, clients, mobile apps, social networks, and IoT devices Creating internal API programs for building innovative edge services in low-code or no-code environments Tools including Integration Platform as a Service, Application Platform as a Service, and Integration Software as a Service The challenge of integrating microservices and serverless architectures Event-driven architectures for processing and reacting to events in real time You'll also learn about a complete pervasive integration solution as a core component of a digital business platform to serve every audience in your organization.

Cyber resilience is the most important feature of any cyber system, especially during the transition to the sixth technological stage and related Industry 4.0 technologies: Artificial Intelligence (AI), Cloud and foggy computing, 5G +, IoT/IIoT, Big Data and ETL, Q-computing, Blockchain, VR/AR, etc. We should even consider the cyber resilience as a primary one, because the mentioned systems cannot exist without it. Indeed, without the sustainable formation made of the

interconnected components of the critical information infrastructure, it does not make sense to discuss the existence of 4.0 Industry cyber-systems. In cases when the cyber security of these systems is mainly focused on the assessment of the incidents' probability and prevention of possible security threats, the cyber resilience is mainly aimed at preserving the targeted behavior and cyber systems' performance under the conditions of known (about 45 %) as well as unknown (the remaining 55 %) cyber attacks. This monograph shows that modern Industry 4.0. cyber systems do not have the required cyber resilience for targeted performance under heterogeneous mass intruder cyber-attacks. A new formulation of the cyber resilience problem under heterogeneous mass cyber-attacks is proposed, in which the cyber system performance recovery in destructive software impacts prevents significant or catastrophic consequences.
BPF and related observability tools give software professionals unprecedented visibility into software, helping them analyze operating system and application performance, troubleshoot code, and strengthen security. BPF Performance Tools: Linux System and Application Observability is the industry's most comprehensive guide to using these tools for observability. Brendan Gregg, author of the industry's definitive guide to system performance, introduces powerful new methods and tools for doing analysis that leads to more robust, reliable, and safer code. This authoritative guide: Explores a wide spectrum of software and hardware targets Thoroughly covers open

source BPF tools from the Linux Foundation iovisor project's bcc and bpftrace repositories Summarizes performance engineering and kernel internals you need to understand Provides and discusses 150+ bpftrace tools, including 80 written specifically for this book: tools you can run as-is, without programming — or customize and develop further, using diverse interfaces and the bpftrace front-end You'll learn how to use BPF (eBPF) tracing tools to analyze CPUs, memory, disks, file systems, networking, languages, applications, containers, hypervisors, security, and the Linux kernel. You'll move from basic to advanced tools and techniques, producing new metrics, stack traces, custom latency histograms, and more. It's like having a superpower: with Gregg's guidance and tools, you can analyze virtually everything that impacts system performance, so you can improve virtually any Linux operating system or application.
"This book provides evidence-based insights into the management and contribution of IT in organizations, to offer practical advice & solutions, models and tools that are instrumental in getting business value from IT"--Provided by publisher.
Despite the buzz surrounding the cloud computing, only a small percentage of organizations have actually deployed this new style of IT—so far. If you're planning your long-term cloud strategy, this practical book provides insider knowledge and actionable real-world lessons regarding planning, design, operations, security, and application transformation.

This book teaches business and technology managers how to transition their organization's traditional IT to cloud computing. Rather than yet another book trying to sell or convince readers on the benefits of clouds, this book provides guidance, lessons learned, and best practices on how to design, deploy, operate, and secure an enterprise cloud based on real-world experience. Author James Bond provides useful guidance and best-practice checklists based on his field experience with real customers and cloud providers. You'll view cloud services from the perspective of a consumer and as an owner/operator of an enterprise private or hybrid cloud, and learn valuable lessons from successful and less-than-successful organization use-case scenarios. This is the information every CIO needs in order to make the business and technical decisions to finally execute on their journey to cloud computing. Get updated trends and definitions in cloud computing, deployment models, and for building or buying cloud services Discover challenges in cloud operations and management not foreseen by early adopters Use real-world lessons to plan and build an enterprise private or hybrid cloud Learn how to assess, port, and migrate legacy applications to the cloud Identify security threats and vulnerabilities unique to the cloud Employ a cloud management system for your enterprise (private or multi-provider hybrid) cloud ecosystem Understand

the challenges for becoming an IT service broker leveraging the power of the cloud

The success of information backup systems does not rest on IT administrators alone. Rather, a well-designed backup system comes about only when several key factors coalesce—business involvement, IT acceptance, best practice designs, enterprise software, and reliable hardware. Enterprise Systems Backup and Recovery: A Corporate Insurance Policy provides organizations with a comprehensive understanding of the principles and features involved in effective enterprise backups. Instead of focusing on any individual backup product, this book recommends corporate procedures and policies that need to be established for comprehensive data protection. It provides relevant information to any organization, regardless of which operating systems or applications are deployed, what backup system is in place, or what planning has been done for business continuity. It explains how backup must be included in every phase of system planning, development, operation, and maintenance. It also provides techniques for analyzing and improving current backup system performance. After reviewing the concepts in this book, organizations will be able to answer these questions with respect to their enterprise: What features and functionality should be expected in a backup environment? What terminology and concepts are unique to backup

software, and what can be related to other areas? How can a backup system be monitored successfully? How can the performance of a backup system be improved? What features are just "window dressing" and should be ignored, as opposed to those features that are relevant? Backup and recovery systems touch on just about every system in an organization. Properly implemented, they can provide an enterprise with greater assurance that its information is safe. By utilizing the information in this book, organizations can take a greater step toward improving the security of their data and preventing the devastating loss of data and business revenue that can occur with poorly constructed or inefficient systems. Engineering systems such as an aircraft or frigate are highly complex and specifically designed to meet the customer's requirements. This important book provides the information necessary to acquire and support complex engineering systems expected to last for a long time. Chapters in the first half of the book examine the life cycles of these systems, their design, testing and certification, and the principles behind their acquisition. The second half of the book reviews topics including operations support and logistics, systems maintenance, reliability and upgrades, and performance and risk analysis, ending with a discussion of the need for continuous improvements in these systems. Creates a new

operational view of modern acquisition, design, services and support systems Applies enterprise modelling and analysis techniques to develop a whole systems view Takes the systems engineering approach to services system design and support How to get the most out of Enterprise Resource Planning (ERP) systems.

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