

Reliability Engineer Certification

A comprehensive reference manual to the Certified Quality Engineer Body of Knowledge and study guide for the CQE exam.

Microsoft Windows Server is a multi-purpose server designed to increase reliability and flexibility of a network infrastructure. Windows Server is the paramount tool used by enterprises in their datacenter and desktop strategy. The most recent versions of Windows Server also provide both server and client virtualization. Its ubiquity in the enterprise results in the need for networking professionals who know how to plan, design, implement, operate, and troubleshoot networks relying on Windows Server. Microsoft Learning is preparing the next round of its Windows Server Certification program with exams covering the new version of the software, Windows Server 2012. The exams and certification path change significantly from the previous version of Windows Server. This provides an opportunity for the MS line to capitalize on the dual disruption of brand-new software and brand-new certifications.

Designed to be used in engineering education and industrial practice, this book provides a comprehensive presentation of reliability engineering for optimized design engineering of products, parts, components and equipment.

This reference manual is designed to help those interested in passing the ASQ's certification exam for Six Sigma Green Belts and others who want a handy reference to the appropriate materials needed to conduct successful Green Belt projects. It is a reference handbook on running projects for those who are already knowledgeable about process improvement and variation reduction. The primary layout of the handbook follows the ASQ Body of Knowledge (BoK) for the Certified Six Sigma Green Belt (CSSGB) updated in 2015. The authors were involved with the first edition handbook, and have utilized first edition user comments, numerous Six Sigma practitioners, and their own personal knowledge gained through helping others prepare for exams to bring together a handbook that they hope will be very beneficial to anyone seeking to pass the ASQ or other Green Belt exams. In addition to the primary text, the authors have added a number of new appendixes, an expanded acronym list, new practice exam questions, and other additional materials. Rules of Thumb for Maintenance and Reliability Engineers will give the engineer the "have to have" information. It will help instill knowledge on a daily basis, to do his or her job and to maintain and assure reliable equipment to help reduce costs. This book will be an easy reference for engineers and managers needing immediate solutions to everyday problems. Most civil, mechanical, and electrical engineers will face issues relating to maintenance and reliability, at some point in their jobs. This will become their "go to" book. Not an oversized handbook or a theoretical treatise, but a handy collection of graphs, charts, calculations, tables, curves, and explanations, basic "rules of thumb" that any engineer

working with equipment will need for basic maintenance and reliability of that equipment. • Access to quick information which will help in day to day and long term engineering solutions in reliability and maintenance • Listing of short articles to help assist engineers in resolving problems they face • Written by two of the top experts in the country

Can a system be considered truly reliable if it isn't fundamentally secure? Or can it be considered secure if it's unreliable? Security is crucial to the design and operation of scalable systems in production, as it plays an important part in product quality, performance, and availability. In this book, experts from Google share best practices to help your organization design scalable and reliable systems that are fundamentally secure. Two previous O'Reilly books from Google—Site Reliability Engineering and The Site Reliability Workbook—demonstrated how and why a commitment to the entire service lifecycle enables organizations to successfully build, deploy, monitor, and maintain software systems. In this latest guide, the authors offer insights into system design, implementation, and maintenance from practitioners who specialize in security and reliability. They also discuss how building and adopting their recommended best practices requires a culture that's supportive of such change. You'll learn about secure and reliable systems through: Design strategies Recommendations for coding, testing, and debugging practices Strategies to prepare for, respond to, and recover from incidents Cultural best practices that help teams across your organization collaborate effectively

A properly implemented and managed RCM program can save millions in unscheduled maintenance and breakdowns. However, many have found the process daunting. Written by an expert with over 30 years of experience, this book introduces innovative approaches to simplify the RCM process such as: single vs. multiple failure analysis, hidden failures analysis, potentially critical components analysis, run-to-failure and the difference between redundant, standby, and backup functions. Included are real life examples of flawed preventive maintenance programs and how they led to disasters that could have easily been avoided. Also illustrated in detail, with real-life examples, is the step-by-step process for developing, implementing, and maintaining a premier classical RCM program. Senior management, middle management, supervisors, and craftsmen/technicians responsible for plant safety and reliability will find this book to be invaluable as a means for establishing a first class preventive maintenance program.

This book is primarily meant to aid those taking the ASQ Certified Quality Engineer (CQE) exam and is best used in conjunction with The Certified Quality Engineer Handbook. Section 1 provides 380 practice questions organized by the seven parts of the 2015 Body of Knowledge (BOK). Section 2 gives the reader 205 additional practice questions from each of the seven parts, in a randomized order. For every question in both sections, detailed solutions are provided that explain why each answer is the correct one and also which section of the BOK the question corresponds to so that any further study needed can be focused on specific sections. A secondary audience is those taking exams for ASQ

certifications whose BOKs' have some crossover with the CQE. Namely, the Certified Six Sigma Black Belt (CSSBB), Certified Six Sigma Green Belt (CSSGB), Certified Reliability Engineer (CRE), and Certified Quality Inspector (CQI). Using this guide in studying for any of these exams would be extremely useful, particularly for the statistics portions of the BOKs. Unlike other resources on the market, all these questions and solutions were developed specifically to address the 2015 CQE Body of Knowledge and help those studying for it, including taking into account the proper depth of knowledge and required levels of cognition. None of this material has appeared in any previous resource or been shoehorned into fitting under the BOK's topics. NOTE: Practice/sample test questions such as those in this study guide cannot be taken into ASQ certification exam rooms.

This handbook is a comprehensive reference designed to help professionals address organizational issues from the application of the basic principles of management to the development of strategies needed to deal with today's technological and societal concerns. The fifth edition of the ASQ Certified Manager of Quality/Organizational Excellence Handbook (CMQ/OE) has undergone some significant content changes in order to provide more clarity regarding the items in the body of knowledge (BoK). Examples have been updated to reflect more current perspectives, and new topics introduced in the most recent BoK are included as well. This handbook addresses:

- Historical perspectives relating to the continued improvement of specific aspects of quality management
- Key principles, concepts, and terminology
- Benefits associated with the application of key concepts and quality management principles
- Best practices describing recognized approaches for good quality management
- Barriers to success, common problems you may encounter, and reasons why some quality initiatives fail
- Guidance for preparation to take the CMQ/OE examination

A well-organized reference, this handbook will certainly help individuals prepare for the ASQ CMQ/OE exam. It also serves as a practical, day-to-day guide for any professional facing various quality management challenges.

Develop the skill to manage and administer Red Hat Enterprise Linux and get ready to achieve the RHCSA certification

Key Features

- Learn the most common administration and security tasks and manage enterprise Linux infrastructures efficiently
- Assess your knowledge using self-assessment questions based on real-world examples
- Understand how to apply the concepts of core systems administration in the real world

Book Description

Whether in infrastructure or development, as a DevOps or site reliability engineer, Linux skills are now more relevant than ever for any IT job, forming the foundation of understanding the most basic layer of your architecture. With Red Hat Enterprise Linux (RHEL) becoming the most popular choice for enterprises worldwide, achieving the Red Hat Certified System Administrator (RHCSA) certification will validate your Linux skills to install, configure, and troubleshoot applications and services on RHEL systems. Complete with easy-to-follow tutorial-style content, self-assessment questions, tips, best practices, and

practical exercises with detailed solutions, this book covers essential RHEL commands, user and group management, software management, networking fundamentals, and much more. You'll start by learning how to create an RHEL 8 virtual machine and get to grips with essential Linux commands. You'll then understand how to manage users and groups on an RHEL 8 system, install software packages, and configure your network interfaces and firewall. As you advance, the book will help you explore disk partitioning, LVM configuration, Stratis volumes, disk compression with VDO, and container management with Podman, Buildah, and Skopeo. By the end of this book, you'll have covered everything included in the RHCSA EX200 certification and be able to use this book as a handy, on-the-job desktop reference guide. This book and its contents are solely the work of Miguel Perez Colino, Pablo Iranzo Gomez, and Scott McCarty. The content does not reflect the views of their employer (Red Hat Inc.). This work has no connection to Red Hat, Inc. and is not endorsed or supported by Red Hat, Inc. What you will learn Deploy RHEL 8 in different footprints, from bare metal and virtualized to the cloud Manage users and software on local and remote systems at scale Discover how to secure a system with SELinux, OpenSCAP, and firewalld Gain an overview of storage components with LVM, Stratis, and VDO Master remote administration with passwordless SSH and tunnels Monitor your systems for resource usage and take actions to fix issues Understand the boot process, performance optimizations, and containers Who this book is for This book is for IT professionals or students who want to start a career in Linux administration and anyone who wants to take the RHCSA 8 certification exam. Basic knowledge of Linux and familiarity with the Linux command-line is necessary. Devising optimal strategy for maintaining industrial plant can be a difficult task of daunting complexity. This book aims to provide the plant engineer with a comprehensive and systematic approach, a framework of guidelines, for tackling this problem, i.e. for deciding maintenance objectives, formulating equipment life plans and plant maintenance schedules, designing the maintenance organisation and setting up appropriate systems of documentation and control. The author, Anthony Kelly, an experienced international consultant and lecturer on this subject, calls his approach BUSINESS-CENTRED MAINTENANCE (BCM) because it springs from, and is driven by, the identification of business objectives, which are then translated into maintenance objectives and which underpin the maintenance strategy formulation. For the first time maintenance management is analysed from the perspective of the whole company and thus makes sense not only technologically but also in economic and business terms. Complete guide to maintenance from a whole-company perspective Best-selling and world-renowned author Complementary to RCM (Moubray) and TPM (Wilmott) The proven Study Guide that prepares you for this new Google Cloud exam The Google Cloud Certified Professional Data Engineer Study Guide, provides everything you need to prepare for this important exam and master the skills necessary to land that coveted Google Cloud Professional Data Engineer certification. Beginning with a pre-book

assessment quiz to evaluate what you know before you begin, each chapter features exam objectives and review questions, plus the online learning environment includes additional complete practice tests. Written by Dan Sullivan, a popular and experienced online course author for machine learning, big data, and Cloud topics, Google Cloud Certified Professional Data Engineer Study Guide is your ace in the hole for deploying and managing analytics and machine learning applications.

- Build and operationalize storage systems, pipelines, and compute infrastructure
- Understand machine learning models and learn how to select pre-built models
- Monitor and troubleshoot machine learning models

Design analytics and machine learning applications that are secure, scalable, and highly available. This exam guide is designed to help you develop an in depth understanding of data engineering and machine learning on Google Cloud Platform.

Explore site reliability engineering practices and learn key Google Cloud Platform (GCP) services such as Cloud Build, Container Registry, GKE, and Cloud Operations to implement DevOps Key Features Learn GCP services for version control, building code, creating artifacts, and deploying secured containerized applications Explore Cloud Operations features such as Metrics Explorer, Logs Explorer, and debug logpoints Prepare for the certification exam using practice questions and mock tests

Book Description DevOps is a set of practices that help remove barriers between developers and system administrators, and is implemented by Google through site reliability engineering (SRE). With the help of this book, you'll explore the evolution of DevOps and SRE, before delving into SRE technical practices such as SLA, SLO, SLI, and error budgets that are critical to building reliable software faster and balance new feature deployment with system reliability. You'll then explore SRE cultural practices such as incident management and being on-call, and learn the building blocks to form SRE teams. The second part of the book focuses on Google Cloud services to implement DevOps via continuous integration and continuous delivery (CI/CD). You'll learn how to add source code via Cloud Source Repositories, build code to create deployment artifacts via Cloud Build, and push it to Container Registry. Moving on, you'll understand the need for container orchestration via Kubernetes, comprehend Kubernetes essentials, apply via Google Kubernetes Engine (GKE), and secure the GKE cluster. Finally, you'll explore Cloud Operations to monitor, alert, debug, trace, and profile deployed applications. By the end of this SRE book, you'll be well-versed with the key concepts necessary for gaining Professional Cloud DevOps Engineer certification with the help of mock tests. What you will learn

- Categorize user journeys and explore different ways to measure SLIs
- Explore the four golden signals for monitoring a user-facing system
- Understand psychological safety along with other SRE cultural practices
- Create containers with build triggers and manual invocations
- Delve into Kubernetes workloads and potential deployment strategies
- Secure GKE clusters via private clusters, Binary Authorization, and shielded GKE nodes
- Get to grips with

monitoring, Metrics Explorer, uptime checks, and alerting Discover how logs are ingested via the Cloud Logging API Who this book is for This book is for cloud system administrators and network engineers interested in resolving cloud-based operational issues. IT professionals looking to enhance their careers in administering Google Cloud services and users who want to learn about applying SRE principles and implementing DevOps in GCP will also benefit from this book. Basic knowledge of cloud computing, GCP services, and CI/CD and hands-on experience with Unix/Linux infrastructure is recommended. You'll also find this book useful if you're interested in achieving Professional Cloud DevOps Engineer certification.

This book/CD-ROM package provides 1) comprehensive coverage -- at an introductory level -- of the entire quality engineering body of knowledge as defined by ASQ, 2) extensive references to specialized resources which provide significantly more depth of coverage, 3) integrative cases in which readers can apply material to simulated "real world" situations, and 4) a computerized testing program (with substantive feedback) that helps users prepare for the CQE and ASQ certification examinations. Covers fundamentals (basic probability concepts, statistics, quality improvement tools); statistical quality control (statistical process control, acceptance sampling, and design of experiments); product/service design and testing (metrology, inspection, and testing; reliability engineering); quality management (product, process, and materials control; quality management principles; quality costs; quality systems; human factors; quality auditing). The accompanying computerized testing program provides a library of examination questions similar to those that may be encountered on the ASQ and CQE examinations. Provides substantive feedback. For anyone interested in Quality Engineering, including those preparing for the CQE and ASQ certification examinations.

Six Sigma for Business Excellence: Approach, Tools, and Applications, based on the author's first-hand experience in quality engineering, provides a comprehensive coverage of the Six Sigma methodology. This book provides the complete study material for students taking the certified Six Sigma Black Belt and Green Belt examinations conducted internationally by the American Society for Quality (ASQ). At the same time, it adequately fills the need of management professionals with numerous application examples and case studies providing an insight into the practical aspect of implementing Six Sigma tools. The book begins with providing an overview of the evolution of Six Sigma, explains the basic concepts and then takes the readers step by step through the process. The focus is more on enabling the implementation of the Six Sigma tools by providing illustrations, tables, application examples, and templates as well as Minitab and Excel data files for project work and exercises in the soft form on a CD accompanying the book. The templates carried in the book include the Sigma calculator, Six Sigma project review checklist, process mapping, confidence intervals, hypothesis tests, project charter, and measurement systems analysis (Gauge R & R Study). The CD also contains a 30-day trial version of the Minitab and SigmaXL software programs.

In 2016, Google's Site Reliability Engineering book ignited an industry discussion on what it means to run production services

today—and why reliability considerations are fundamental to service design. Now, Google engineers who worked on that bestseller introduce *The Site Reliability Workbook*, a hands-on companion that uses concrete examples to show you how to put SRE principles and practices to work in your environment. This new workbook not only combines practical examples from Google's experiences, but also provides case studies from Google's Cloud Platform customers who underwent this journey. Evernote, The Home Depot, The New York Times, and other companies outline hard-won experiences of what worked for them and what didn't. Dive into this workbook and learn how to flesh out your own SRE practice, no matter what size your company is. You'll learn: How to run reliable services in environments you don't completely control—like cloud Practical applications of how to create, monitor, and run your services via Service Level Objectives How to convert existing ops teams to SRE—including how to dig out of operational overload Methods for starting SRE from either greenfield or brownfield

Reliability Centered Maintenance – Reengineered: Practical Optimization of the RCM Process with RCM-R® provides an optimized approach to a well-established and highly successful method used for determining failure management policies for physical assets. It makes the original method that was developed to enhance flight safety far more useful in a broad range of industries where asset criticality ranges from high to low. RCM-R® is focused on the science of failures and what must be done to enable long-term sustainably reliable operations. If used correctly, RCM-R® is the first step in delivering fewer breakdowns, more productive capacity, lower costs, safer operations and improved environmental performance. Maintenance has a huge impact on most businesses whether its presence is felt or not. RCM-R® ensures that the right work is done to guarantee there are as few nasty surprises as possible that can harm the business in any way. RCM-R® was developed to leverage on RCM's original success at delivering that effectiveness while addressing the concerns of the industrial market. RCM-R® addresses the RCM method and shortfalls in its application -- It modifies the method to consider asset and even failure mode criticality so that rigor is applied only where it is truly needed. It removes (within reason) the sources of concern about RCM being overly rigorous and too labor intensive without compromising on its ability to deliver a tailored failure management program for physical assets sensitive to their operational context and application. RCM-R® also provides its practitioners with standard based guidance for determining meaningful failure modes and causes facilitating their analysis for optimum outcome. Includes extensive review of the well proven RCM method and what is needed to make it successful in the industrial environment Links important elements of the RCM method with relevant International Standards for risk management and failure management Enhances RCM with increased emphasis on statistical analysis, bringing it squarely into the realm of Evidence Based Asset Management Includes extensive, experience based advice on implementing and sustaining RCM based failure management programs

Practice questions and test to aid those studying to take the ASQ Certified Six Sigma Black Belt exam. Practice questions and a practice exam to aid those studying to take the ASQ Certified Six Sigma Black Belt exam.

Organizations big and small have started to realize just how crucial system and application reliability is to their business. They've also learned just how difficult it is to maintain that reliability while iterating at the speed demanded by the marketplace. Site

Reliability Engineering (SRE) is a proven approach to this challenge. SRE is a large and rich topic to discuss. Google led the way with Site Reliability Engineering, the wildly successful O'Reilly book that described Google's creation of the discipline and the implementation that's allowed them to operate at a planetary scale. Inspired by that earlier work, this book explores a very different part of the SRE space. The more than two dozen chapters in Seeking SRE bring you into some of the important conversations going on in the SRE world right now. Listen as engineers and other leaders in the field discuss: Different ways of implementing SRE and SRE principles in a wide variety of settings How SRE relates to other approaches such as DevOps Specialties on the cutting edge that will soon be commonplace in SRE Best practices and technologies that make practicing SRE easier The important but rarely explored human side of SRE David N. Blank-Edelman is the book's curator and editor.

Introduction Vision, Mission and Strategy Maintenance Basics Planning and Scheduling Parts, Materials and Tools Management Reliability Operational Reliability M&R Tools Performance Measure - Metrics Human Side of M&R Best Practices/Benchmarking Maintenance Excellence Appendices

The reliability maturity matrix is a framework to help you understand the organization's reliability culture and to make improvements to that culture, as needed. Recommendations that move the organization to the right on the maturity matrix should address all the key reliability practice areas. This book includes specific steps to move an organization from one block of the matrix to the block to the right. This book's intent is to provide you with practical and actionable information so you can change the culture of your organization and consistently create reliable products for your customers.

This book was written to aid quality technicians and engineers. It is a compilation of 30 years of quality-related work experience and the result of frustration at the number of books necessary, at times, to provide statistical support. To that end, the intent of this book is to provide the quality professional working in virtually any industry a quick, convenient, and comprehensive guide to properly utilize statistics in an efficient and effective manner. This book will be a useful reference when preparing for and taking many of the ASQ quality certification examinations, including the Certified Quality Technician (CQT), Certified Six Sigma Green Belt (CSSGB), Certified Quality Engineer (CQE), Certified Six Sigma Black Belt (CSSBB), and Certified Reliability Engineer (CRE). This book is an expansion of the work of Robert A. Dovich in his books Quality Engineering Statistics and Reliability Statistics. It builds on and expands Dovich's method of presenting statistical applications in a simple, easy-to-follow format.

The overwhelming majority of a software system's lifespan is spent in use, not in design or implementation. So, why does conventional wisdom insist that software engineers focus primarily on the design and development of large-scale computing systems? In this collection of essays and articles, key members of Google's Site Reliability Team explain how and why their commitment to the entire lifecycle has enabled the company to successfully build, deploy, monitor, and maintain some of the largest software systems in the world. You'll learn the principles and practices that enable Google

engineers to make systems more scalable, reliable, and efficient—lessons directly applicable to your organization. This book is divided into four sections: Introduction—Learn what site reliability engineering is and why it differs from conventional IT industry practices Principles—Examine the patterns, behaviors, and areas of concern that influence the work of a site reliability engineer (SRE) Practices—Understand the theory and practice of an SRE's day-to-day work: building and operating large distributed computing systems Management—Explore Google's best practices for training, communication, and meetings that your organization can use

A comprehensive reference manual to the Certified Reliability Engineer Body of Knowledge and study guide for the CRE exam.

Root Cause Analysis, or RCA, "What is it?" Everyone uses the term, but everyone does it differently. How can we have any uniformity in our approach, much less accurately compare our results, if we're applying different definitions? At a high level, we will explain the difference between RCA and Shallow Cause Analysis, because that is the difference between allowing a failure to recur or dramatically reducing the risk of recurrence. In this book, we will get down to basics about RCA, the fundamentals of blocking and tackling, and explain the common steps of any investigative occupation. Common investigation steps include: Preserving evidence (data)/not allowing hearsay to fly as fact Organizing an appropriate team/minimizing potential bias Analyzing the events/reconstructing the incident based on actual evidence Communicating findings and recommendations/ensuring effective recommendations are actually developed and implemented Tracking bottom-line results/ensuring that identified, meaningful metrics were attained We explore, "Why don't things always go as planned?" When our actual plans deviate from our intended plans, we usually experience some type of undesirable or unintended outcome. We analyze the anatomy of a failure (undesirable outcome) and provide a step-by-step guide to conducting a comprehensive RCA based on our 3+ decades of applying RCA as we have successfully practiced it in the field. This book is written as a how-to guide to effectively apply the PROACT® RCA methodology to any undesirable outcome, is directed at practitioners who have to do the real work, focuses on the core elements of any investigation, and provides a field-proven case as a model for effective application. This book is for anyone charged with having a thorough understanding of why something went wrong, such as those in EH&S, maintenance, reliability, quality, engineering, and operations to name just a few.

The infrastructure-as-code revolution in IT is also affecting database administration. With this practical book, developers, system administrators, and junior to mid-level DBAs will learn how the modern practice of site reliability engineering applies to the craft of database architecture and operations. Authors Laine Campbell and Charity Majors provide a framework for professionals looking to join the ranks of today's database reliability engineers (DBRE). You'll begin by

exploring core operational concepts that DBREs need to master. Then you'll examine a wide range of database persistence options, including how to implement key technologies to provide resilient, scalable, and performant data storage and retrieval. With a firm foundation in database reliability engineering, you'll be ready to dive into the architecture and operations of any modern database. This book covers: Service-level requirements and risk management Building and evolving an architecture for operational visibility Infrastructure engineering and infrastructure management How to facilitate the release management process Data storage, indexing, and replication Identifying datastore characteristics and best use cases Datastore architectural components and data-driven architectures

If you create, manage, operate, or configure systems running in the cloud, you're a cloud engineer--even if you work as a system administrator, software developer, data scientist, or site reliability engineer. With this book, professionals from around the world provide valuable insight into today's cloud engineering role. These concise articles explore the entire cloud computing experience, including fundamentals, architecture, and migration. You'll delve into security and compliance, operations and reliability, and software development. And examine networking, organizational culture, and more. You're sure to find 1, 2, or 97 things that inspire you to dig deeper and expand your own career. "Three Keys to Making the Right Multicloud Decisions," Brendan O'Leary "Serverless Bad Practices," Manases Jesus Galindo Bello "Failing a Cloud Migration," Lee Atchison "Treat Your Cloud Environment as If It Were On Premises," Iyana Garry "What Is Toil, and Why Are SREs Obsessed with It?", Zachary Nickens "Lean QA: The QA Evolving in the DevOps World," Theresa Neate "How Economies of Scale Work in the Cloud," Jon Moore "The Cloud Is Not About the Cloud," Ken Corless "Data Gravity: The Importance of Data Management in the Cloud," Geoff Hughes "Even in the Cloud, the Network Is the Foundation," David Murray "Cloud Engineering Is About Culture, Not Containers," Holly Cummins This Microsoft Official Academic Course (MOAC) IT Professional curriculum prepares certification students for success every step of the way. This 70-413 Designing and Implementing a Server Infrastructure exam course is the first of a series of two exams Microsoft Certified Solutions Associates (MCSE) candidates are required to pass to gain the MCSE: Windows Server 2012 and Windows Server 2012 R2 certification. These MCSE exams test the skills and knowledge necessary to design, implement, and maintain a Windows Server 2012 infrastructure in an enterprise scaled, highly virtualized environment. Passing these exams confirms students' ability to plan, configure, and implement the Windows Server 2012 services, such as server deployment, server virtualization, and network access and infrastructure. This complete ready-to-teach MOAC program is mapped to all of the exam objectives.

ASQ's Certified Quality Improvement Associate (CQIA) certification is designed to introduce the basics of quality to organizations and individuals not currently working within the field of quality. This book and the Body of Knowledge (BOK) it supports are intended to form a

foundation for further study and application of proven quality principles and practices worldwide. The book follows the CQIA BoK in both content and sequence. The intent is that this book will serve as a guide to be used in preparation to take the CQIA examination given by ASQ. Each chapter stands alone, and the chapters may be read in any order. Some material reaching beyond the content of the BoK has been added. Supplemental reading suggestions are provided. An online, interactive sample exam and a paper-and-pencil sample can be found on the ASQ website (<http://asq.org/cert/quality-improvement-associate/prepare>).

Originally created for agile software development, scrum provides project managers with the flexibility needed to meet ever-changing consumer demands. Presenting a modified version of the agile software development framework, Scrum Project Management introduces Scrum basics and explains how to apply this adaptive technique to effectively manage a w

Although service-level objectives (SLOs) continue to grow in importance, there's a distinct lack of information about how to implement them. Practical advice that does exist usually assumes that your team already has the infrastructure, tooling, and culture in place. In this book, recognized SLO expert Alex Hidalgo explains how to build an SLO culture from the ground up. Ideal as a primer and daily reference for anyone creating both the culture and tooling necessary for SLO-based approaches to reliability, this guide provides detailed analysis of advanced SLO and service-level indicator (SLI) techniques. Armed with mathematical models and statistical knowledge to help you get the most out of an SLO-based approach, you'll learn how to build systems capable of measuring meaningful SLIs with buy-in across all departments of your organization. Define SLIs that meaningfully measure the reliability of a service from a user's perspective Choose appropriate SLO targets, including how to perform statistical and probabilistic analysis Use error budgets to help your team have better discussions and make better data-driven decisions Build supportive tooling and resources required for an SLO-based approach Use SLO data to present meaningful reports to leadership and your users

A comprehensive reference manual to the Certified Software Quality Engineer Body of Knowledge and study guide for the CSQE exam. The first edition of the award-winning Maintenance and Reliability Best Practices immediately became one of the most widely read texts by maintenance, reliability, operations, and safety professionals. It is also being used at many colleges and universities throughout the world. Maintenance and Reliability Best Practices has become a standard reference for anyone preparing for maintenance and reliability professional exams. In the time since original publication, this book has become a must-have guide and reference. It helps everyone ensure that their organization's assets are operating as and when needed and at reasonable cost. The new Third Edition includes updates throughout, with new material on integrity, ethics, diversity, and standards, plus a focus on maintenance budgets and asset management.

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