

Mastering Core Essentials: TOGAF Preliminary Phase (Volume 2)

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.

The TOGAF® Standard, a standard of The Open Group, is a proven Enterprise Architecture methodology and framework used by the world’s leading organizations to improve business efficiency. It is the most prominent and reliable Enterprise Architecture standard, ensuring consistent standards, methods, and communication among Enterprise Architecture professionals. Those professionals fluent in the TOGAF approach enjoy greater industry credibility, job effectiveness, and career opportunities. The TOGAF approach helps practitioners avoid being locked into proprietary methods, utilize resources more efficiently and effectively, and realize a greater return on investment. Practical advice for redesigning “big, old” companies for digital success, with examples from Amazon, BNY Mellon, LEGO, Philips, USAA, and many other global organizations. Most established companies have deployed such digital technologies as the cloud, mobile apps, the internet of things, and artificial intelligence. But few established companies are designed for digital. This book offers an essential guide for retooling organizations for digital success. In the digital economy, rapid pace of change in technology capabilities and customer desires means that business strategy must be fluid. As a result, the authors explain, business design has become a critical management responsibility. Effective business design enables a company to quickly pivot in response to new competitive threats and opportunities. Most leaders today, however, rely on organizational structure to implement strategy, unaware that structure inhibits, rather than enables, agility. In companies that are designed for digital, people, processes, data, and technology are synchronized to identify and deliver innovative customer solutions—and redefine strategy. Digital design, not strategy, is what separates winners from losers in the digital economy. Designed for Digital offers practical advice on digital transformation, with examples that include Amazon, BNY Mellon, DBS Bank, LEGO, Philips, Schneider Electric, USAA, and many other global organizations. Drawing on five years of research and in-depth case studies, the book is an essential guide for companies that want to disrupt rather than be disrupted in the new digital landscape. Five Building Blocks of Digital Business Success Shared Customer Insights Operational Backbone Digital Platform Accountability Framework External Developer Platform Build scalable microservices with Spring, Docker, and Mesos About This Book Learn how to efficiently build and implement microservices in Spring, and how to use Docker and Mesos to push the boundaries of what you thought possible Examine a number of real-world use cases and hands-on code examples. Distribute your microservices in a completely new way Who This Book Is For If you are a Spring developers and want to build cloud-ready, internet-scale applications to meet modern business demands, then this book is for you Developers will understand how to build simple Restful services and organically grow them to truly enterprise grade microservices ecosystems. What You Will Learn Get to know the microservices development lifecycle process See how to implement microservices governance Familiarize yourself with the microservices architecture and its benefits Use Spring Boot to develop microservices Find out how to avoid common pitfalls when developing microservices Be introduced to end-to-end microservices written in Spring Framework and Spring Boot In Detail The Spring Framework is an application framework and inversion of the control container for the Java platform. The framework’s core features can be used by any Java application, but there are extensions to build web applications on top of the Java EE platform. This book will help you implement the microservice architecture in Spring Framework, Spring Boot, and Spring Cloud. Written to the latest specifications of Spring, you’ll be able to build modern, Internet-scale Java applications in no time. We would start off with the guidelines to implement responsive microservices at scale. We will then deep dive into Spring Boot, Spring Cloud, Docker, Mesos, and Marathon. Next you will understand how Spring Boot is used to deploy autonomous services, server-less by removing the need to have a heavy-weight application server. Later you will learn how to go further by deploying your microservices to Docker and manage it with Mesos. By the end of the book, you’ll will gain more clarity on how to implement microservices using Spring Framework and use them in Internet-scale deployments through real-world examples. Style and approach The book follows a step by step approach on how to develop microservices using Spring Framework, Spring Boot, and a set of Spring Cloud components that will help you scale your applications. Modelling, Communication and Analysis The TOGAF® Standard, Version 9.2

Microservice Architecture

ArchiMate® 2.0 Specification

Enterprise Master Data Management (Paperback)

Interaction Flow Modeling Language

ArchiMate®, an Open Group Standard, is an open and independent modelling language for Enterprise Architecture that is supported by different tool vendors and consulting firms. ArchiMate provides instruments to enable enterprise architects to describe, analyze, and visualize the relationships among business domains in an unambiguous way. This book provides the official specification of ArchiMate 2.1 from The Open Group. ArchiMate 2.1 is a maintenance update to ArchiMate 2.0, addressing comments raised since the introduction of ArchiMate 2.0 in 2012. The ArchiMate 2.1 Standard supports modelling throughout the TOGAF® Architecture Development Method (ADM). The intended audience is threefold: Enterprise Architecture practitioners, such as architects (e.g. application, information, process, infrastructure, and, obviously, enterprise architects), senior and operational management, project leaders, and anyone committed to work within the reference framework defined by the Enterprise Architecture. Those who intend to implement ArchiMate in a software tool; they will find a complete and detailed description of the language in this book. The academic community, on which we rely for amending and improving the language, based on state-of-the-art research results in the enterprise architecture field.

Winner of a Shingo Research and Professional Publication Award Information Technology is supposed to enable business performance and innovation, improve service levels, manage change, and maintain quality and stability, all while steadily reducing operating costs. Yet when an enterprise begins a Lean transformation, too often the IT department is either left out or viewed as an obstacle. What is to be done? Winner of a 2011 Shingo Research and Professional Publication Award, this book shares practical tips, examples, and case studies to help you establish a culture of continuous improvement to deliver IT operational excellence and business value to your organization. Praise for: ...will have a permanent place in my bookshelf. —Gene Kim, Chief Technology Officer, Tripwire, Inc. ... provides an unprecedented look at the role that Lean IT will play in making this revolutionary shift and the critical steps for sustained success. —Steve Castellanos, Lean Enterprise Director, Nike, Inc. Twenty years from now the firms which dominate their industries will have fully embraced Lean strategies throughout their IT organizations. —Scott W. Ambler, Chief Methodologist for Agile and Lean, IBM Rational ... a great survival manual for those needing nimble and adaptive systems. —Dr. David Labby, MD, PhD, Medical Director and Director of Clinical Support and Innovation, CareOregon ... makes a major contribution in an often-ignored but much-needed area. —John Bicheno, Program Director MS in Lean Operations, Cardiff University ... a comprehensive view into the world of Lean IT, a must read! —Dave Wilson, Quality Management, Oregon Health & Science University

This book bridges the gap between Business and IT services and proposes an original life-cycle view of the modern service industry. Major solution architectures, technologies and research methods are discussed in the lifecycle of services innovation research. The book provides readers with new research and solution methods to enable IT services and computing technology to better create and manage business services, which is the goal of Services Computing.

The practice of enterprise application development has benefited from the emergence of many new enabling technologies. Multi-tiered object-oriented platforms, such as Java and .NET, have become commonplace. These new tools and technologies are capable of building powerful applications, but they are not easily implemented. Common failures in enterprise applications often occur because their developers do not understand the architectural lessons that experienced object developers have learned. Patterns of Enterprise Application Architecture is written in direct response to the stiff challenges that face enterprise application developers. The author, noted object-oriented designer Martin Fowler, noticed that despite changes in technology—from Smalltalk to CORBA to Java to .NET—the same basic design ideas can be adapted and applied to solve common problems. With the help of an expert group of contributors, Martin distills over forty recurring solutions into patterns. The result is an indispensable handbook of solutions that are applicable to any enterprise application platform. This book is actually two books in one. The first section is a short tutorial on developing enterprise applications, which you can read from start to finish to understand the scope of the book’s lessons. The next section, the bulk of the book, is a detailed reference to the patterns themselves. Each pattern provides usage and implementation information, as well as detailed code examples in Java or C#. The entire book is also richly illustrated with UML diagrams to further explain the concepts. Armed with this book, you will have the knowledge necessary to make important architectural decisions about building an enterprise application and the proven patterns for use when building them. The topics covered include · Dividing an enterprise application into layers · The major approaches to organizing business logic · An in-depth treatment of mapping between objects and relational databases · Using Model-View-Controller to organize a Web presentation · Handling concurrency for data that spans multiple transactions · Designing distributed object interfaces

Multi-Cloud Architecture and Governance

Challenges, Best Practices, and Future Developments

Systems Engineering and Analysis of Electro-Optical and Infrared Systems

A Beginner’s Guide

Pattern Enterpr Applica Arch

Data Analytics Basics

How to Architect Your Business for Sustained Success

The Open Group Architecture Framework (TOGAF) is a framework a detailed method and a set of supporting tools for developing an enterprise architecture, developed by members of The Open Group Architecture Forum (www.opengroup.org/architecture).As a comprehensive, open method for enterprise architecture, TOGAF Version 9 complements, and can be used in conjunction with, other frameworks that are more focused on specific aspects of architecture or for vertical sectors such as Government, Defense, and Finance.TOGAF may be used freely by any organization wishing to develop an enterprise architecture for use within that organization (subject to the Conditions of Use).This book is divided into seven main parts :PART I (Introduction) This part provides a high-level introduction to the key concepts of enterprise architecture and in particular the TOGAF approach. It contains the definitions of terms used throughout TOGAF and release notes detailing the changes between this version and the previous version of TOGAF.PART II (Architecture Development Method) This is the core of TOGAF. It describes the TOGAF Architecture Development Method (ADM) a step-by-step approach to developing an enterprise architecture.PART III (ADM Guidelines & Techniques) This part contains a collection of guidelines and techniques available for use in applying TOGAF and the TOGAF ADM.PART IV (Architecture Content Framework) This part describes the TOGAF content framework, including a structured metamodel for architectural artifacts, the use of re-usable architecture building blocks, and an overview of typical architecture deliverables.PART V (Enterprise Continuum & Tools) This part discusses appropriate taxonomies and tools to categorize and store the outputs of architecture activity within an enterprise.PART VI (TOGAF Reference Models) This part provides a selection of architectural reference models, which includes the TOGAF Foundation Architecture, and the Integrated Information Infrastructure Reference Model (III-RM).PART VII (Architecture Capability Framework) This part discusses the organization, processes, skills, roles, and responsibilities required to establish and operate an architecture function within an enterprise.

Business Model Generation is a handbook for visionaries, game changers, and challengers striving to defy outmoded business models and design tomorrow’s enterprises. If your organization needs to adapt to harsh new realities, but you don’t yet have a strategy that will get you out in front of your competitors, you need Business Model Generation. Co-created by 470 “Business Model Canvas” practitioners from 45 countries, the book features a beautiful, highly visual, 4-color design that takes powerful strategic ideas and tools, and makes them easy to implement in your organization. It explains the most common Business Model patterns, based on concepts from leading business thinkers, and helps you reinterpret them for your own context. You will learn how to systematically understand, design, and implement a game-changing business model—or analyze and renovate an old one. Along the way, you’ll understand at a much deeper level your customers, distribution channels, partners, revenue streams, costs, and your core value proposition. Business Model Generation features practical innovation techniques used today by leading consultants and companies worldwide, including 3M, Ericsson, Capgemini, Deloitte, and others. Designed for doers, it is for those ready to abandon outmoded thinking and embrace new models of value creation: for executives, consultants, entrepreneurs, and leaders of all organizations. If you’re ready to change the rules, you belong to “the business model generation!”

As a result of a rigorous, methodical process that (ISC) follows to routinely update its credential exams, it has announced that enhancements will be made to both the Certified Information Systems Security Professional (CISSP) credential, beginning April 15, 2015. (ISC) conducts this process on a regular basis to ensure that the examinations and

Informatics, the science of processing data for storage and retrieval, is vital in today’s healthcare environment. At the core of informatics practice is the electronic health record (EHR). However, the scope of informatics encompasses many areas peripheral to the EHR, such as use of mobile devices, patient portals, data analytics, telehealth, and conducting health IT research. Health informatics specialists are at the forefront of effective programs that are changing patient outcomes and education, but producing these systems is not a simple task for any healthcare professional. This book presents key informatics concepts to help readers increase knowledge and expertise. The authors begin with the phases of the system development lifecycle (SDLC): planning and analysis, design and usability, testing, implementation, maintenance, and evaluation. This overview provides informatics nurses, physicians, pharmacists, dentists, dieticians, and other clinical professionals with a solid foundation of knowledge of each SDLC phase, positioning them for success within any clinical system. Coverage includes: Essential tools for project management Patient safety and engagement Security and privacy concepts Healthcare clinical decision support

First Enterprise Engineering Working Conference, EEWC 2011, Antwerp, Belgium, May 16-17, 2011, Proceedings

The Complete Business Process Handbook

Official (ISC)2 Guide to the CISSP CBK

The Cornerstones of Enterprise Architecture

Advances in Enterprise Engineering V

Spring Microservices

Fowler

Mastering ArchiMate is a book about the ArchiMate(r) Enterprise Architecture Modeling Language, which is an open standard and a Registered Trade Mark of The Open Group. This book gives an introduction to the language and then goes on to show you many different patterns for its use. From Business to Infrastructure, from Risk & Security to Application Exploitation and Maintenance. The first edition was published in 2012 and quickly became widely used. The Open Group even pub- lished a white paper "ArchiMate, Understanding the Basics" that was almost literally taken from the ArchiMate Basics chapter of the first edition of this book. This second edition has twice the diagrams in a book roughly one and a half times the pages of the first edition. There are several new subjects, like linking ArchiMate to BPMN. It has been updated to ArchiMate 2.1. Gerben Wierda (1961) is Lead Architect of APG Asset Management, one of the largest Fiduciary Managers in the world. He has overseen the construction of one of the largest single ArchiMate models in the world to date. He holds an M.Sc. in Physics from the University of Groningen and an MBA from RSM Erasmus, Rotterdam.

A comprehensive guide to architecting, managing, implementing, and controlling multi-cloud environments Key FeaturesDeliver robust multi-cloud environments and improve your business productivityStay in control of the cost, governance, development, security, and continuous improvement of your multi-cloud solutionIntegrate different solutions, principles, and practices into one multi-cloud foundationBook Description Multi-cloud has emerged as one of the top cloud computing trends, with businesses wanting to reduce their reliance on only one vendor. But when organizations shift to multiple cloud services without a clear strategy, they may face certain difficulties, in terms of how to stay in control, how to keep all the different components secure, and how to execute the cross-cloud development of applications. This book combines best practices from different cloud adoption frameworks to help you find solutions to these problems. With step-by-step explanations of essential concepts and practical examples, you’ll begin by planning the foundation, creating the architecture, designing the governance model, and implementing tools, processes, and technologies to manage multi-cloud environments. You’ll then discover how to design workload environments using different cloud propositions, understand how to optimize the use of these cloud technologies, and automate and monitor the environments. As you advance, you’ll delve into multi-cloud governance, defining clear demarcation models and management processes. Finally, you’ll learn about managing identities in multi-cloud: who’s doing what, why, when, and where By the end of this book, you’ll be able to create, implement, and manage multi-cloud architectures with confidence What you will learnGet to grips with the core functions of multiple cloud platformsDeploy, automate, and secure different cloud solutionsDesign network strategy and get to grips with identity and access management for multi-cloudDesign a landing zone spanning multiple cloud platformsUse automation, monitoring, and management tools for multi-cloudUnderstand multi-cloud management with the principles of BaseOps, FinOps, SecOps, and DevOpsDefine multi-cloud security policies and use cloud security toolsTest, integrate, deploy, and release using multi-cloud CI/CD pipelinesWho this book is for This book is for architects and lead engineers involved in architecting multi-cloud environments, with a focus on getting governance right to stay in control of developments in multi-cloud. Basic knowledge of different cloud platforms (Azure, AWS, GCP, VMWare, and OpenStack) and understanding of IT governance is necessary.

An enterprise architecture tries to describe and control an organisation’s structure, processes, applications, systems and techniques in an integrated way. The unambiguous specification and description of components and their relationships in such an architecture requires a coherent architecture modelling language. Lankhorst and his co-authors present such an enterprise modelling language that captures the complexity of architectural domains and their relations and allows the construction of integrated enterprise architecture models. They provide architects with concrete instruments that improve their architectural practice. As this is not enough, they additionally present techniques and heuristics for communicating with all relevant stakeholders about these architectures. Since an architecture model is useful not only for providing insight into the current or future situation but can also be used to evaluate the transition from ‘as-is’ to ‘to-be’, the authors also describe analysis methods for assessing both the qualitative impact of changes to an architecture and the quantitative aspects of architectures, such as performance and cost issues. The modelling language presented has been proven in practice in many real-life case studies and has been adopted by The Open Group as an international standard. So this book is an ideal companion for enterprise IT or business architects in industry as well as for computer or management science students studying the field of enterprise architecture.

This book is based on class notes for a course in the MS program in Systems Engineering at Johns Hopkins University. The program was a cooperative effort between senior systems engineers from the Johns Hopkins University Applied Physics Laboratory and the Westinghouse Electric Company. The authors were part of the curriculum design team as well as members of the faculty.

Mastering ArchiMate

A Handbook for Visionaries, Game Changers, and Challengers

Mastering Informatics: A Healthcare Handbook for Success

Enterprise Ontology

The Open Group Architecture Framework TOGAF Version 9

Masterclass Enterprise Architecture Management

ArchiMate® 2.1 Specification

Resource added for the Business Analyst program 101021

Design for large-scale, high-performance queries using Snowflake’s query processing engine to empower data consumers with timely, comprehensive, and secure access to data. This book also helps you protect your most valuable data assets using built-in security features such as end-to-end encryption for data at rest and in transit. It demonstrates key features in Snowflake and shows how to exploit those features to deliver a personalized experience to your customers. It also shows how to ingest the high volumes of both structured and unstructured data that are needed for game-changing business intelligence analysis. Mastering Snowflake Solutions starts with a refresher on Snowflake’s unique architecture before getting into the advanced concepts that make Snowflake the market-leading product it is today. Progressing through each chapter, you will learn how to leverage storage, query processing, cloning, data sharing, and continuous data protection features. This approach allows for greater operational agility in responding to the needs of modern enterprises, for example in supporting agile development techniques via database cloning. The practical examples and

in-depth background on theory in this book help you unleash the power of Snowflake in building a high-performance system with little to no administrative overhead. Your result from reading will be a deep understanding of Snowflake that enables taking full advantage of Snowflake's architecture to deliver value analytics insight to your business. What You Will Learn Optimize performance and costs associated with your use of the Snowflake data platform Enable data security to help in complying with consumer privacy regulations such as CCPA and GDPR Share data securely both inside your organization and with external partners Gain visibility to each interaction with your customers using continuous data feeds from Snowpipe Break down data silos to gain complete visibility your business-critical processes Transform customer experience and product quality through real-time analytics Who This Book Is For Data engineers, scientists, and architects who have had some exposure to the Snowflake data platform or bring some experience from working with another relational database. This book is for those beginning to struggle with new challenges as their Snowflake environment begins to mature, becoming more complex with ever increasing amounts of data, users, and requirements. New problems require a new approach and this book aims to arm you with the practical knowledge required to take advantage of Snowflake's unique architecture to get the results you need. This book covers the most critical 24 NFRs that are applicable to IT applications and systems. About This Book Explains three stages of nonfunctional requirements, that is, analysis, architecture, and assessment In-depth knowledge of NFR framework and taxonomy that provides guidance around the modelling phase for the NFRs Coverage of 24 critical and pivotal NFRs, including the analysis, architecture, and assessment. Who This Book Is For The primary audience for this title are the gamut of roles starting from IT consultant to chief architects who are responsible to deliver strategic, tactical, and operational engagements for fortune 100 customers worldwide. Nonfunctional requirements are the key to any software / IT program. They cannot be overlooked or ignored. The book provides a comprehensive approach from analysis, architecture, and measurement of nonfunctional requirements. The book includes considerations for bespoke (Java, .Net, and COTS applications). These are applicable to IT applications from various domains. The book outlines the methodology for capturing the NFRs and also describes a framework that can be leveraged by analysts and architects for tackling NFRs for various engagements. The audience for this book include business analysts, enterprise architects, business architects, solution architects, technical architects/designers, domain/security/integration architects, software developers, support engineers and test engineers, technical project managers, project leads/technical leads/technical project managers, and students from the computer science/IT stream What You Will Learn Learn techniques related to the analysis, architecture, and monitoring of NFRs Understand the various tools, techniques, and processes in order to improve the overall quality of the desired outcomes Embrace the best practices of architecting, metrics, and success factors for NFRs Identify the common pitfalls to be avoided and the patterns to leverage Understand taxonomy and framework for NFRs Learn the design guidelines for architecting applications and systems relating to NFRs Abstract different methodologies to analyze and gather NFRs In Detail Non-functional Requirements are key to any software/IT program and cannot be overlooked or ignored. This book provides a comprehensive approach to the analysis, architecture, and measurement of NFRs. It includes considerations for bespoke Java, .NET, and COTS applications that are applicable to IT applications/systems in different domains. The book outlines the methodology for capturing the NFRs and also describes a framework that can be leveraged by analysts and architects for tackling NFRs for various engagements. This book starts off by explaining the various KPIs, taxonomies, and methods for identifying NFRs. Learn the design guidelines for architecting applications and systems relating to NFRs and design principles to achieve the desired outcome. We will then move on to various key tiers/layers and patterns pertaining to the business, database, and integrating tiers. After this, we will dive deep into the topics pertaining to techniques related to monitoring and measurement of NFRs, such as sizing, analytical modeling, and quality assurance. Lastly, we end the book by describing some pivotal NFRs and checklists for the software quality attributes related to the business, application, data, and infrastructure domains. Style and approach The book takes a pragmatic approach, describing various techniques related to the analysis of NFRs, the architecture of NFRs, and assessment of NFRs.

Interaction Flow Modeling Language describes how to apply model-driven techniques to the problem of designing the front end of software applications, i.e., the user interaction. The book introduces the reader to the novel OMG standard Interaction Flow Modeling Language (IFML). Authors Marco Brambilla and Piero Fraternali are authors of the IFML standard and wrote this book to explain the main concepts of the language. They effectively illustrate how IFML can be applied in practice to the specification and implementation of complex web and mobile applications, featuring rich interactive interfaces, both browser based and native, client side components and widgets, and connections to data sources, business logic components and services. Interaction Flow Modeling Language provides you with unique insight into the benefits of engineering web and mobile applications with an agile model driven approach. Concepts are explained through intuitive examples, drawn from real-world applications. The authors accompany you in the voyage from visual specifications of requirements to design and code production. The book distills more than twenty years of practice and provides a mix of methodological principles and concrete and immediately applicable techniques. Learn OMG's new IFML standard from the authors of the standard with this approachable reference Introduces IFML concepts step-by-step, with many practical examples and an end-to-end case example Shows how to integrate IFML with other OMG standards including UML, BPMN, CWM, SoaML and SysML Discusses how to map models into code for a variety of web and mobile platforms and includes many useful interface modeling patterns and best practices

The TOGAF® Standard, Version 9.2 - A Pocket Guide

Strategic Enterprise Architecture Management

Competences of IT Architects

Enterprise Architecture at Work

Enabling and Sustaining Your Lean Transformation

Architecture Principles

Salesforce B2C Solution Architect's Handbook

ArchiMate®, an Open Group Standard, is an open and independent modeling language for Enterprise Architecture that is supported by different tool vendors and consulting firms. ArchiMate provides instruments to enable enterprise architects to describe, analyze, and visualize the relationships among business domains in an unambiguous way. This book provides the official specification of ArchiMate 2.0 from The Open Group. ArchiMate 2.0 is an upwards-compatible evolution from ArchiMate 1.0 adding new features, as well as addressing usage feedback. The ArchiMate 2.0 Standard supports modeling throughout the TOGAF® Architecture Development Method (ADM). The intended audience is threefold: Enterprise Architecture practitioners, such as architects (e.g., application, information, process, infrastructure, and, obviously, enterprise architects), senior and operational management, project leaders, and anyone committed to work within the reference framework defined by the Enterprise Architecture. Those who intend to implement ArchiMate in a software tool; they will find a complete and detailed description of the language in this book. The academic community, on which we rely for amending and improving the language based on state-of-the-art research results in the architecture field.

Enterprises, from small to large, evolve continuously. As a result, their structures are transformed and extended continuously. Without some means of control, such changes are bound to lead to an overly complex, uncoordinated and heterogeneous environment that is hard to manage and hard to adapt to future changes. Enterprise architecture principles provide a means to direct transformations of enterprises. As a consequence, architecture principles should be seen as the cornerstones of any architecture. In this book, Greeffhorst and Proper focus on the role of architecture principles. They provide both a theoretical and a practical perspective on architecture principles. The theoretical perspective involves a brief survey of the general concept of principle as well as an analysis of different flavors of principles. Architecture principles are regarded as a specific class of normative principles that direct the design of an enterprise, from the definition of its business to its supporting IT. The practical perspective on architecture principles is concerned with an approach to the formulation of architecture principles, as well as their actual use in organizations. To illustrate their use in practice, several real-life cases are discussed, an application of architecture principles in TOGAF is included, and a catalogue of example architecture principles is provided. With this broad coverage, the authors target students and researchers specializing in enterprise architecture or business information systems, as well as practitioners who want to understand the foundations underlying their practical daily work.

This book constitutes the proceedings of the first Enterprise Engineering Working Conference (EEWC), held in Antwerp, Belgium, May 16-17, 2011. EEWC aims at addressing the challenges that modern and complex enterprises are facing in a rapidly changing world. The participants of the working conference share the belief that dealing with these challenges requires rigorous and scientific solutions, focusing on the design and engineering of enterprises. The goal of EEWC is to stimulate interaction between the different stakeholders, scientists as well as practitioners, interested in making Enterprise Engineering a reality. The 8 papers presented were carefully reviewed and selected for inclusion in the book. EEWC 2011 had 24 submissions of which 8 were accepted for publication. The topics of the papers encouraged active participation in interesting discussions and the exchange of ideas, and stimulated future cooperation among the participants. This made EEWC a real 'working conference' contributing to the further development of Enterprise Engineering as a mature discipline. The topics covered include designing organizations with DEMO, combining DEMO with other methods, and studies in enterprise architecture.

Electro-optical and infrared systems are fundamental in the military, medical, commercial, industrial, and private sectors. Systems Engineering and Analysis of Electro-Optical and Infrared Systems integrates solid fundamental systems engineering principles, methods, and techniques with the technical focus of contemporary electro-optical and infrared optics, imaging, and detection methodologies and systems. The book provides a running case study throughout that illustrates concepts and applies topics learned. It explores the benefits of a solid systems engineering-oriented approach focused on electro-optical and infrared systems. This book covers fundamental systems engineering principles as applied to optical systems, demonstrating how modern-day systems engineering methods, tools, and techniques can help you to optimally develop, support, and dispose of complex, optical systems. It introduces contemporary systems development paradigms such as model-based systems engineering, agile development, enterprise architecture methods, systems of systems, family of systems, rapid prototyping, and more. It focuses on the connection between the high-level systems engineering methodologies and detailed optical analytical methods to analyze, and understand optical systems performance capabilities. Organized into three distinct sections, the book covers modern, fundamental, and general systems engineering principles, methods, and techniques needed throughout an optical system's development lifecycle (SDLC); optical systems building blocks that provide necessary optical systems analysis methods, techniques, and technical fundamentals; and an integrated case study that unites these two areas. It provides enough theory, analytical content, and technical depth that you will be able to analyze optical systems from both a systems and technical perspective.

Transformation of Strategy, Organization, Processes, Data, and Applications

Design scalable and cohesive business-to-consumer experiences with Salesforce Customer 360

Mastering Snowflake Solutions

Reference Architecture for the Telecommunications Industry

Theory and Methodology

Leverage Azure, AWS, GCP, and VMware vSphere to build effective multi-cloud solutions

Systems Engineering: Principles And Practice

This book constitutes the thoroughly refereed proceedings of eight international workshops held in Valencia, Spain, in conjunction with the 25th International Conference on Advanced Information Systems Engineering, CAISE 2013, in June 2013. The 36 full and 12 short papers have undertaken a high-quality and selective acceptance policy, resulting in acceptance rates of up to 50% for full research papers. The eight workshops were Approaches for Enterprise Engineering Research (AppEER), International Workshop on BUSIness/IT ALignment and Interoperability (BUSITAL), International Workshop on Cognitive Aspects of Information Systems Engineering (COGNISE), Workshop on Human-Centric Information Systems (HC-IS), Next Generation Enterprise and Business Innovation Systems (NGBIS), International Workshop on Ontologies and Conceptual Modeling (OntoCom), International Workshop on Variability Support in Information Systems (VarIS), International Workshop on Information Systems Security Engineering (WISSE).

Mastering Informatics: A Healthcare Handbook for SuccessSigma Theta Tau

Data analytics is increasingly becoming a key element in shaping a company 's business strategy. Today, data influences every decision made by an organization, and this is driving the wide-scale adoption of data analytics, including machine learning technologies and artificial intelligence solutions. The heightened focus is propelling a surge in data analytics spending, reflected in various studies conducted by leading market research firms. The field of data analytics offers some amazing salaries and is not only the hottest IT job, but it is also one of the best-paying jobs in the world. This guide aims at providing the readers with everything they need to know about the data analytics field, basic terminologies, key concepts, real-life use cases, skills you must master in order to scale up your career, and training and certifications you might need to reach your dream job.

The Complete Business Process Handbook is the most comprehensive body of knowledge on business processes with revealing new research. Written as a practical guide for Executives, Practitioners, Managers and Students by the authorities that have shaped the way we think and work with process today. It stands out as a masterpiece, being part of the BPM bachelor and master degree curriculum at universities around the world, with revealing academic research and insight from the leaders in the market. This book provides everything you need to know about the processes and frameworks, methods, and approaches to implement BPM. Through real-world examples, best practices, LEADing practices and advice from experts, readers will understand how BPM works and how to best use it to their advantage. Cases from industry leaders and innovators show how early adopters of LEADing Practices improved their businesses by using BPM technology and methodology. As the first of three volumes, this book represents the most comprehensive body of knowledge published on business process. Following closely behind, the second volume uniquely bridges theory with how BPM is applied today with the most extensive information on extended BPM. The third volume will explore award winning real-life examples of leading business process practices and how it can be replaced to your advantage. Learn what Business Process is and how to get started Comprehensive historical process evolution In-depth look at the Process Anatomy, Semantics and Ontology Find out how to link Strategy to Operation with value driven BPM Uncover how to establish a way of Thinking, Working, Modelling and Implementation Explore comprehensive Frameworks, Methods and Approaches How to build BPM competencies and establish a Center of Excellence Discover how to apply Social BPM, Sustainable and Evidence based BPM Learn how Value & Performance Measurement and Management Learn how to roll-out and deploy process Explore how to enable Process Owners, Roles and Knowledge Workers Discover how to Process and Application Modelling Uncover Process Lifecycle, Maturity, Alignment and Continuous Improvement Practical continuous improvement with the way of Governance Future BPM trends that will affect business Explore the BPM Body of Knowledge

7th Workshop, TEAR 2012, and 5th Working Conference, PRET 2012, Held at The Open Group Conference 2012, Barcelona, Spain, October 23-24, 2012, Proceedings

Designed for Digital

Integrated research agenda Cyber-Physical Systems (agendaCPS)

CAiSE 2013 International Workshops, Valencia, Spain, June 17-21, 2013, Proceedings

Mastering Non-Functional Requirements

Body of Knowledge from Process Modeling to BPM

Living in a networked world

The ultimate handbook for new and seasoned Salesforce B2C Solution Architects who want to design seamless B2C solutions across the Salesforce Customer 360 ecosystem – including B2C Commerce, Service Cloud, and Marketing Cloud Key FeaturesGive your customers a frictionless experience by creating a unified view of all their interactionsGet your architectural design right the first time and avoid costly reworksPrepare for the B2C Solution Architect exam and Salesforce certification with practical scenarios following Salesforce best practicesBook Description The market for Salesforce professionals who can create a single view of the customer across the Salesforce Customer 360 platform and leverage data into actionable insights. With Salesforce B2C Solution Architect's Handbook, you'll gain a deeper understanding of the integrated products that help you deliver value for organizations. While this book will help you prepare for the B2C Solution Architect exam, its true value lies in setting you up for success afterwards. The first few chapters will help you develop a solid understanding of the capabilities of the Customer 360 ecosystem, their data models, and governance. As you progress, you'll explore the role of a B2C solution architect in planning critical requirements and implementation sequences to avoid costly reworks and unnecessary delays. You'll learn about the available options for products with the Salesforce ecosystem and demonstrate best practices for data modeling across Salesforce products and beyond. Once you've mastered the core knowledge, you'll also learn about tools, techniques, and certification scenarios in preparation for the B2C Solution Architect exam. At the end of this book, you'll have the skills to design scalable, secure, and future-proof solutions supporting critical business demands. What you will learnExplore key Customer 360 products and their integration optionsChoose the optimum integration architecture to unify data across productsArchitect a single view of the customer to support service, marketing, and commercePlan for critical requirements, design decisions, and implementation sequences to avoid sub-optimal solutionsIntegrate Customer 360 solutions into a single-source-of-truth solution modelSupport business needs that require functionality from more than one component by orchestrating data and user flowsWho this book is for This book is for professionals in high-level job roles that heavily rely on Salesforce proficiency. It's primarily written for B2C commerce application architects, integration architects, as well as system architects, enterprise architects, Salesforce architects, and CTO teams looking to benefit from a deeper understanding of this platform. Before you get started, you'll need a solid understanding of data integration, data governance, and systems, along with knowledge of the fundamentals of business-to-consumer (B2C) customer experiences.

The Only Complete Technical Primer for MDM Planners, Architects, and Implementers Companies moving toward flexible SOA architectures often face difficult information management and integration challenges. The master data they rely on is often stored and managed in ways that are inconsistent, inaccessible, non-standardized, and poorly governed. Using Master Data Management (MDM), organizations can regain control of their master data, improve corresponding business processes, and maximize its value in SOA environments. Enterprise Master Data Management: An authoritative, vendor-independent MDM technical reference for practitioners: architects, technical analysts, consultants, solution designers, and senior IT decisionmakers. Written by the IBM® data management innovators who are pioneering MDM, this book systematically introduces key concepts and technical themes, explains its business case, and illuminates how it interrelates with and enables SOA. Drawing on their experience with cutting-edge projects, the authors introduce MDM patterns, blueprints, solutions, and best practices published nowhere else—establish a consistent, manageable set of master data, and use it for competitive advantage. Coverage includes How MDM and SOA complement each other Using the MDM Reference Architecture to position and design MDM solutions within an enterprise Assessing the value and data and applying the right security controls Using PIM-MDM and CDI-MDM Solution Blueprints to address industry-specific information management challenges Explaining MDM patterns as enablers to accelerate consistent MDM deployments incorporating MDM solutions into SOA via MDM Integration Blueprints Leveraging master data as an enterprise asset—bringing people, processes, and technology together with MDM and data governance Best practices in MDM deployment, including data warehouse and SAP integration

This book reflects the tremendous changes in the telecommunications industry in the course of the past few decades – shorter innovation cycles, stiffer competition and new communication products. It analyzes the transformation of processes, applications and network technologies expected to take place under enormous time pressure. The International Telecommunication Union (ITU) and the TM Forum have provided reference solutions that are broadly recognized and used throughout the value chain of the telecommunications industry, and which can be adopted as a de facto standard. The book describes how these reference solutions can be used in a practical context: it presents the latest insights into their development, highlights lessons learned from numerous international projects and combines them with well-founded research results in information management and reference modeling. The complete architectural transformation is explained, from the planning and set-up stage to the implementation. Featuring a wealth of examples and illustrations, the book offers a valuable resource for telecommunication professionals, enterprise architects and project managers alike.

This textbook provides a hands-on introduction to enterprise architecture management. It guides the reader through the applications of methods and tools to typical business problems by presenting enterprise architecture frameworks and by sharing experiences from industry. The book represents the typical stages of the journey of an enterprise architect. Chapter 1 addresses the central question of what to achieve with the introduction of an enterprise architecture. Chapter 2 then introduces concepts and visualizations for business architecture that help to design a business. In chapter 3 the development of an application architecture is outlined, which provides transparency on information systems and their business context. Next, chapter 4 presents visual tools to analyze, improve and eventually optimize the application landscape. Chapter 5 describes traditional organizational as well as collaborative approaches to enterprise architecture management. Eventually, several established enterprise architecture frameworks like TOGAF, Zachmann, ArchiMate, and IAF are described in chapter 6. The book concludes with a summary and an outlook on future research potential in chapter 7. Based on their experiences through several years of teaching, the authors introduce students step-by-step to enterprise architecture development and management. Their book is intended as a guide for master classes at universities and in-company training and references for further reading.

An SOA Approach to Managing Core Information

Supporting Analytics and Data Sharing

Enterprise Application Architecture with .NET Core

Lean IT

Services Computing

Business Model Generation

Aligning Principles, Practices, and Culture

The rapid progress of information technology allows for increasingly powerful software intensive embedded systems (machines) executing integrated applications connected by and to global networks. Thus these systems are more and more networked among each other, but also with data and services on the Internet. Intelligent solutions originate which gather processes of the living environment by means of sensors and actuators, connect them to virtual software worlds and interpret, monitor and control these processes in interaction with people. In this way, so-called Cyber-Physical Systems evolve – a living in a networked world. The interlocking applications include smart cities, social infrastructures with integrated telemedicine care, enhanced connected mobility with fully or semi-autonomous driving cars and traffic systems, safety, security and privacy as well as networked production and the sustainable energy turnaround. The integrated research agenda Cyber-Physical-Systems (agendaCPS) provides a comprehensive overview of the capabilities and benefits of the arising CPS-applications and manifold technological and social challenges involved. The agenda illustrates which value the subject for economy and society has: revolutionary applications of Cyber-Physical Systems address technological and social trends and needs; at the same time they penetrate and interconnect more and more areas of life. On the basis of concrete future scenarios essential application domains are shown. Their analysis reveals which capabilities and technologies form the basis of Cyber-Physical systems and which innovation and possible conflict potential is inherent. The agendaCPS makes clear which research and action areas are from particular importance. In these contexts opportunities, but also risks become apparent for Germany by Cyber-Physical Systems. This is the English translation of the report agenda Cyber-Physical Systems finished three years ago as a German acatech project by a German publication.

Architect and design highly scalable, robust, clean and highly performant applications in .NET Core About This Book Incorporate architectural soft-skills such as DevOps and Agile methodologies to enhance program-level objectives Gain knowledge of architectural approaches on the likes of SOA architecture and microservices to provide traceability and rationale for architectural decisions Explore a variety of practical use cases and code examples to implement the tools and techniques described in the book Who This Book Is For This book is for experienced .NET developers who are aspiring to become architects of enterprise-grade applications, as well as software architects who would like to leverage .NET to create effective blueprints of applications. What You Will Learn Grasp the important aspects and best practices of application lifecycle management Leverage the popular ALM tools, application insights, and their usage to monitor performance, testability, and optimization tools in an enterprise Explore various authentication models such as social media-based authentication, 2FA and OpenID Connect, learn authorization techniques Explore Azure with various solution approaches for Microservices and Serverless architecture along with Docker containers Gain knowledge about the recent market trends and practices and how they can be achieved with .NET Core and Microsoft tools and technologies In Detail If you want to design and develop enterprise applications using .NET Core as the development framework and learn about industry-wide best practices and guidelines, then this book is for you. The book starts with a brief introduction to enterprise architecture, which will help you to understand what enterprise architecture is and what the key components are. It will then teach you about the types of patterns and the principles of software development, and explain the various aspects of distributed computing to keep your applications effective and scalable. These chapters act as a catalyst to start the practical implementation, and design and develop applications using different architectural approaches, such as layered architecture, service oriented architecture, microservices and cloud-specific solutions. Gradually, you will learn about the different approaches and models of the Security framework and explore various authentication models and authorization techniques, such as social media-based

authentication and safe storage using app secrets. By the end of the book, you will get to know the concepts and usage of the emerging fields, such as DevOps, BigData, architectural practices, and Artificial Intelligence. Style and approach Filled with examples and use cases, this guide takes a no-nonsense approach to show you the best tools and techniques required to become a successful software architect.

Microservices can have a positive impact on your enterprise—just ask Amazon and Netflix—but you can fall into many traps if you don't approach them in the right way. This practical guide covers the entire microservices landscape, including the principles, technologies, and methodologies of this unique, modular style of system building. You'll learn about the experiences of organizations around the globe that have successfully adopted microservices. In three parts, this book explains how these services work and what it means to build an application the Microservices Way. You'll explore a design-based approach to microservice architecture with guidance for implementing various elements. And you'll get a set of recipes and practices for meeting practical, organizational, and cultural challenges to microservice adoption. Learn how microservices can help you drive business objectives Examine the principles, practices, and culture that define microservice architectures Explore a model for creating complex systems and a design process for building a microservice architecture Learn the fundamental design concepts for individual microservices Delve into the operational elements of a microservices architecture, including containers and service discovery Discover how to handle the challenges of introducing microservice architecture in your organization

About This Book This book, "Managing Digital: Concepts and Practices", is intended to guide a practitioner through the journey of building a digital-first viewpoint and the skills needed to thrive in the digital-first world. As such, this book is a bit of an experiment for The Open Group; it isn't structured as a traditional standard or guide. Instead, it is structured to show the key issues and skills needed at each stage of the digital journey, starting with the basics of a small digital project, eventually building to the concerns of a large enterprise. So, feel free to digest this book in stages — the section Introduction for the student is a good guide. The book is intended for both academic and industry training purposes. This book seeks to provide guidance for both new entrants into the digital workforce and experienced practitioners seeking to update their understanding on how all the various themes and components of IT management fit together in the new world. About The Open Group Press The Open Group Press is an imprint of The Open Group for advancing knowledge of information technology by publishing works from individual authors within The Open Group membership that are relevant to advancing The Open Group mission of Boundaryless Information Flow™. The key focus of The Open Group Press is to publish high-quality monographs, as well as introductory technology books intended for the general public, and act as a complement to The Open Group Standards, Guides, and White Papers. The views and opinions expressed in this book are those of the author, and do not necessarily reflect the consensus position of The Open Group members or staff.

Cloud Enterprise Architecture

Model-Driven UI Engineering of Web and Mobile Apps with IFML

Trends in Enterprise Architecture Research and Practice-Driven Research on Enterprise Transformation

Advanced Information Systems Engineering Workshops

Managing Digital

CBAP / CCBA Certified Business Analysis Study Guide

This is the official Pocket Guide for the TOGAF® Standard, Version 9.2, from The Open Group. It is published in hard copy and electronic formats by Van Haren Publishing. The TOGAF Standard, a standard of The Open Group, is a proven Enterprise Architecture methodology and framework used by the world's leading organizations to improve business efficiency. It is the most prominent and reliable Enterprise Architecture standard, ensuring consistent standards, methods, and communication among Enterprise Architecture professionals. Those professionals who are fluent in the TOGAF approach enjoy greater industry credibility, job effectiveness, and career opportunities. The TOGAF approach helps practitioners avoid being locked into proprietary methods, utilize resources more efficiently and effectively, and realize a greater return on investment.

If one thing catches the eye in almost all literature about (re)designing or (re)engineering of enterprises, it is the lack of a well-founded theory about their construction and operation. Often even the most basic notions like "action" or "process" are not precisely defined. Next, in order to master the diversity and the complexity of contemporary enterprises, theories are needed that separate the stable essence of an enterprise from the variable way in which it is realized and implemented. Such a theory and a matching methodology, which has passed the test of practical experience, constitute the contents of this book. The enterprise ontology, as developed by Dietz, is the starting point for profoundly understanding the organization of an enterprise and subsequently for analyzing, (re)designing, and (re)engineering it. The approach covers numerous issues in an integrated way: business processes, in- and outsourcing, information systems, management control, staffing etc. Researchers and students in enterprise engineering or related fields will discover in this book a revolutionary new way of thinking about business and organization. In addition, it provides managers, business analysts, and enterprise information system designers for the first time with a solid and integrated insight into their daily work.

The Enterprise Architecture Management (EAM) discipline deals with the alignment of business and information systems architectures. While EAM has long been regarded as a discipline for IT managers, this book takes a different stance: It explains how top executives can use EAM to leverage their strategic planning and controlling processes, as well as how it can contribute to their sustainable competitive advantage. Based on the analysis of best practices from eight leading European companies from various industries, the book presents the crucial elements of successful EAM. It outlines what executives need to do in terms of governance, processes, methodologies, and culture in order to bring their management to the next level. Beyond this, the book points out how EAM could develop in the next decade, thus allowing today's managers to prepare for the future architecture management.

This volume constitutes the proceedings of the combined 7th International Workshop on Trends in Enterprise Architecture Research (TEAR 2012) and the 5th Working Conference on Practice-Driven Research on Enterprise Transformation (PRET-5), held in Barcelona, Spain, October 23-24, 2012, and co-located with The Open Group's Conference on Enterprise Architecture, Cloud Computing, and Security. Joining the forces of the two events with The Open Group Conference provided the unique opportunity for an intensive exchange between practitioners as well as for discussions on standardization efforts and academic research in the areas of enterprise transformation and enterprise architecture (EA). Based on careful reviews by at least three Program Committee members, 18 papers were chosen for inclusion in these proceedings. They were presented in six sessions on enterprise architecture management (EAM) effectivity, languages for EA, EAM and the ability to change, advanced topics in EA, governing enterprise transformations, and EA applications.