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Introduction

Information Technology Marketplace accounts for sizeable portion of workforce, as well as computer propeller-heads and thrill-seekers.

IT workers and those who do things with computers for fun (and most of us belong to both categories) must possess both broad and deep knowledge and skills. This is especially true if you are facing challenges of building and integrating complex large-scale computer systems for the modern enterprise, with many technologies and products in the picture.

It is amazing how much is there to know in IT, and how fast the knowledge base changes. You won't survive for long on just a large memory bank. You need a guide and a reference to find your way in the maze of technologies.
You should be able to see a true value behind the hype, and to position certain technology against the swag of others. And this is a goal for any person aspiring to become and stay an IT professional.

Target Audience

This book will appeal to all sorts of IT community members who are involved in building the IT solutions for the enterprise, or studying to become the lucky ones.

We see Solution Architects and Integration Architects, Software Architects and Systems Engineers, and alike as primary beneficiaries of the book.
These people out there in the trenches have to learn a lot just to stay where they are. They are bound to have at times some gaps in their knowledge, but may be unwilling to admit, or to expose themselves to peers or bosses, naturally.

We aim to help IT Consultants and other Practitioners in building and integrating solutions for medium to large-scale enterprise.
CEO and CIO of such enterprise will find this book an accessible and broad reference.

Analyst Programmers and Software Engineers, who seek to broaden their horizon and opportunities in IT industry, may find this book to be a good springboard into unchartered waters.
Ability to grasp Enterprise Architecture in its entirety will help motivated rookie, or narrowly focused IT Practitioner, to elevate themselves on new levels of understanding of their working environment, to open new doors, and to achieve higher career goals, whatever these goals are.

University teachers and students alike will find this book worth the trouble in their Computer Systems study.

Objectives and Scope

There are books on all imaginable topics. And, if you are not lazy to search, there is vast amount of readily available information on the Internet. Just chew, swallow and digest, and pray that you swallowed something good for you, or at least fresh. Also, hopefully you've got a stomach for it.

That is the problem with your knowledge base and the stomach (sorry, brain), which are your tools of trade after all. You will need a lot of food that you can digest - so you stay healthy, and earn envy and respect of friends… Where were we? Ah, yes.

We aim in this project to give you a down-to-earth cookbook and the reference guide to building the IT solutions for the modern enterprise. We give you a broad view of the terrain, as well as peek into the Enterprise Architect toolbox.

We strive for the broad look and the measured level of depth of the specific topics – deep enough to be of interest as an initial source, and as pointer to further references for the professional.

We wanted to make sure that any member of our target audience is interested on every stretch of the road. We are going to be practical, pragmatic and accessible, without compromising the rigour of our highly demanding and professional field.

We all are spending so much time and energy to become and to be professional that we might as well have fun together while we are at it. We feel we succeeded on this account.

We attempted here to collate, digest and succinctly present to you definitions of main concepts, quality measures, techniques and methodologies, technologies and tools in building the Enterprise Solutions, with emphasis on comprehensive but practical no-nonsense approach.
We aim to arm you with knowledge and understanding of principles that will withstand the test of time. Well, at least some time – you know how dynamic our industry is.

No doubt, you are an expert in some topics that we cover. Still, you may see our explanations as good reference, or a fresh angle on something that you know well. Feel free to give it a cursory glance, or just skip it. It would be safe to assume, that you cannot possibly be equally an expert in all technologies, and you should find other parts of the book of more interest to you.
Or, you may find insufficient detail here. We won't apologise for that. We make sure that you grasp a concept in this book, and follow provided references for further research of the topic if required.

Nobody is perfect, and no Enterprise Architect should claim to be. Admit to yourself (as we have done too) – you cannot possibly be an expert equally in everything that will directly impact your enterprise project. Your strength is not so much in knowing something well, but rather in understanding of what you do not know well enough, and in actively collaborating with other stakeholders who cover remaining gaps in building the complex enterprise solutions.
Levelled overall understanding of the whole landscape, and relative positioning of technologies on the big picture becomes of greater importance to the Enterprise Architect than narrow and deep expertise in selected technologies, however important and future-proof they seem to be at the time.

Book aims to cover all major industry trends, as well as hardware, software, networking and configuration patterns in practical situations.
We will assist you in asserting true no-hype position of certain technologies in their context, and in relation to other developments in information technology.

Our Value Proposition

We found that there is gap in IT literature with no single practical reference book that would take the stock of available and emerging technologies, techniques and products. In our work, we ourselves were longing for the single source that summarily represents tools of trade of the Enterprise Integration Architect, and has a decent shelf life.
At the same time, such a cookbook-style practical guide is expected to be of great interest to many other types of IT Practitioners and Managers, Educators and Students.

We are working in the industry that is unique in many respects. Information Technology, as we know it, is unique in a sense that the whole cycle of the industry evolution to-date happened in the lifetime of the man (well, at least in the lifetime of some of us).
Given the rapid dynamics of the industry evolution, insight from experience is of great practical value in our daily work. This insight is of even greater value for the most of today's movers and shakers in the industry who, for obvious reasons, did not have an opportunity to live through, and to experience this evolution first-hand.

Author accumulated many years of practical experience and the academic knowledge in multitude of IT technologies and products, in various industries, and throughout the whole life cycle of the computer application. Sum of such experiences will allow us to see well through fads and hype in finding real-life compromises while building viable large-scale solutions.

Book shares with the reader the digest of broad knowledge and experiences, and lets the reader learn the lessons of many projects that succeeded or failed (which is even more educational).

Book Style and Conventions

As a general convention, figures will be numbered starting with 1 in every chapter, and pre-pended with the Chapter number for uniqueness, like *Figure 15.2* (i.e. figure number 2 in Chapter 15).

Figures in the introductory chapters (i.e. before the Chapter 1) will be numbered like *Figure0.1* – programmer can always weasel his or her way around the minor obstacles   .

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Author learned and received professional help from many people, often without them even realising this.

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About Author

Boris Monin is a practicing Software Architect and mentor with more than twenty years of extensive hands-on experience in IT industry that cuts across various technologies, platforms, methodologies, application domains, and stages in the software life cycle.
Boris gained and applied his hands-on expertise in the successful build and implementation of large-scale Internet applications in telecommunications, finance and multimedia.
Currently, Boris enjoys building the Intenet-facing infrastructure and applications for the large and diverse Enterprise in the Telecommunication industry in Australia, in the role of Senior IT Architect.

Boris was awarded the status of Practicing Member of the World Wide Institute of Software Architects (WWISA).
Faithful to his programmer roots even as an Architect, he attained his Java certification and tries to keep his hands dirty.

His exposure to the full life cycle of software applications, from inception through design, construction and support, gave him the practical understanding of Object-Oriented paradigm, Distributed Computing and Middleware, Databases, Transaction Processing, Security and Internet technologies.
This broad exposure and deep (at least in some areas) expertise gives him an opportunity to take on the challenge of consolidating the broad knowledge base and best practices of the Software Architect, as well as presenting it in accessible, balanced, and responsible fashion.

Boris's passion and commitment to the IT industry shows in his ability for presenting and sharing the knowledge of IT technologies and solutions in various technical or business forums, in printed and Internet media.
Boris is the founder and driving force behind the SAFE House initiative.

Boris completed his Bachelor of Computer Science with honours at the Polytechnic University in Riga, Latvia.

In private life… What private life? Although, Boris takes his soccer seriously.

Boris and family live in the most livable city in the world – Melbourne, Australia.