Industrial Deployment of System Engineering Methods

From Alexander Romanovsky

Industrial Deployment of System Engineering Methods From Alexander Romanovsky

A formal method is not the main engine of a development process, its contribution is to improve system dependability by motivating formalisation where useful. This book summarizes the results of the DEPLOY research project on engineering methods for dependable systems through the industrial deployment of formal methods in software development. The applications considered were in automotive, aerospace, railway, and enterprise information systems, and microprocessor design.

The project introduced a formal method, Event-B, into several industrial organisations and built on the lessons learned to provide an ecosystem of better tools, documentation and support to help others to select and introduce rigorous systems engineering methods. The contributing authors report on these projects and the lessons learned. For the academic and research partners and the tool vendors, the project identified improvements required in the methods and supporting tools, while the industrial partners learned about the value of formal methods in general. A particular feature of the book is the frank assessment of the managerial and organisational challenges, the weaknesses in some current methods and supporting tools, and the ways in which they can be successfully overcome.

The book will be of value to academic researchers, systems and software engineers developing critical systems, industrial managers, policymakers, and regulators.

⬇ **Download** Industrial Deployment of System Engineering Method ...pdf

Industrial Deployment of System Engineering Methods

From Alexander Romanovsky

Industrial Deployment of System Engineering Methods From Alexander Romanovsky

A formal method is not the main engine of a development process, its contribution is to improve system dependability by motivating formalisation where useful. This book summarizes the results of the DEPLOY research project on engineering methods for dependable systems through the industrial deployment of formal methods in software development. The applications considered were in automotive, aerospace, railway, and enterprise information systems, and microprocessor design.

The project introduced a formal method, Event-B, into several industrial organisations and built on the lessons learned to provide an ecosystem of better tools, documentation and support to help others to select and introduce rigorous systems engineering methods. The contributing authors report on these projects and the lessons learned. For the academic and research partners and the tool vendors, the project identified improvements required in the methods and supporting tools, while the industrial partners learned about the value of formal methods in general. A particular feature of the book is the frank assessment of the managerial and organisational challenges, the weaknesses in some current methods and supporting tools, and the ways in which they can be successfully overcome.

The book will be of value to academic researchers, systems and software engineers developing critical systems, industrial managers, policymakers, and regulators.

Industrial Deployment of System Engineering Methods From Alexander Romanovsky Bibliography

- Rank: #9088439 in Books
- Brand: Alexander Romanovsky
- Published on: 2013-07-10
- Original language: English
- Number of items: 1
- Dimensions: 9.40" h x .80" w x 6.40" l, 1.20 pounds
- Binding: Hardcover
- 262 pages

Download and Read Free Online Industrial Deployment of System Engineering Methods From Alexander Romanovsky

Editorial Review

Review
"This book reports on a remarkable four-year experiment in the application of scientific method to the development and delivery of software products. Participants in the experiment included seven well-reputed universities, and four industries, spanning a range of sizes, and drawn from different industrial sectors. Over 157 person-years were expended in total. This book conveys the fruits of the experience gained in the project. It gives a clear record of the successes of the project and of the challenges that remain. It should be studied by researchers who strive to advance the state of the art of programming in industry; also by innovative industries, wishing to judge the adequacy of the current state of the art to meet their future software development needs. Above all, it should be read by all who are interested in a successful model of industrial and academic collaboration, and who wish such experiments to be repeated." [Tony Hoare, Microsoft Research]

"[T]his book describes a project that has made a major contribution towards bridging the gap between formalists and practitioners in software development for dependable systems. The detailed substance of the contribution lies in the specifics of what has been done; but the full value lies even more in the cooperative way in which the project has been carried out and the open-minded acknowledgment of challenges. This book will amply repay a careful and thoughtful reading by researchers and practitioners alike." [Michael Jackson, London]

From the Back Cover

A formal method is not the main engine of a development process, its contribution is to improve system dependability by motivating formalisation where useful. This book summarizes the results of the DEPLOY research project on engineering methods for dependable systems through the industrial deployment of formal methods in software development. The applications considered were in automotive, aerospace, railway, and enterprise information systems, and microprocessor design.

The project introduced a formal method, Event-B, into several industrial organisations and built on the lessons learned to provide an ecosystem of better tools, documentation and support to help others to select and introduce rigorous systems engineering methods. The contributing authors report on these projects and the lessons learned. For the academic and research partners and the tool vendors, the project identified improvements required in the methods and supporting tools, while the industrial partners learned about the value of formal methods in general. A particular feature of the book is the frank assessment of the managerial and organisational challenges, the weaknesses in some current methods and supporting tools, and the ways in which they can be successfully overcome.

The book will be of value to academic researchers, systems and software engineers developing critical systems, industrial managers, policymakers, and regulators.

About the Author

Prof. Alexander Romanovsky works in the School of Computing Science, Newcastle University; he has been working on system dependability and fault tolerance for many years, in particular on reasoning about faults and fault tolerance during early phases of system development, and he coordinated the related RODIN and DEPLOY projects.

Dr. Martyn Thomas in an industrialist who has been concerned with safety-critical and other high-dependence computer systems since the 1980s.

Users Review

From reader reviews:

Jaleesa Greenwood:

Do you have favorite book? When you have, what is your favorite's book? Guide is very important thing for us to understand everything in the world. Each book has different aim as well as goal; it means that reserve has different type. Some people experience enjoy to spend their time for you to read a book. They are really reading whatever they acquire because their hobby is usually reading a book. Consider the person who don't like looking at a book? Sometime, person feel need book if they found difficult problem or maybe exercise. Well, probably you will want this Industrial Deployment of System Engineering Methods.

Lauren Graves:

The book Industrial Deployment of System Engineering Methods can give more knowledge and information about everything you want. Why must we leave the good thing like a book Industrial Deployment of System Engineering Methods? A number of you have a different opinion about e-book. But one aim in which book can give many facts for us. It is absolutely suitable. Right now, try to closer using your book. Knowledge or details that you take for that, you may give for each other; you may share all of these. Book Industrial Deployment of System Engineering Methods has simple shape but the truth is know: it has great and massive function for you. You can look the enormous world by open up and read a guide. So it is very wonderful.

Richard Hunt:

This book untitled Industrial Deployment of System Engineering Methods to be one of several books that will best seller in this year, that is because when you read this book you can get a lot of benefit onto it. You will easily to buy this kind of book in the book store or you can order it via online. The publisher of the book sells the e-book too. It makes you easier to read this book, because you can read this book in your Smart phone. So there is no reason to your account to past this guide from your list.

Gene Taylor:

You may spend your free time to see this book this guide. This Industrial Deployment of System Engineering Methods is simple to deliver you can read it in the playground, in the beach, train in addition to

soon. If you did not possess much space to bring typically the printed book, you can buy the particular e-book. It is make you easier to read it. You can save often the book in your smart phone. Consequently there are a lot of benefits that you will get when you buy this book.

Download and Read Online Industrial Deployment of System Engineering Methods From Alexander Romanovsky #O7F5V3XYA26

Read Industrial Deployment of System Engineering Methods From Alexander Romanovsky for online ebook

Industrial Deployment of System Engineering Methods From Alexander Romanovsky Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Industrial Deployment of System Engineering Methods From Alexander Romanovsky books to read online.

Online Industrial Deployment of System Engineering Methods From Alexander Romanovsky ebook PDF download

Industrial Deployment of System Engineering Methods From Alexander Romanovsky Doc

Industrial Deployment of System Engineering Methods From Alexander Romanovsky Mobipocket

Industrial Deployment of System Engineering Methods From Alexander Romanovsky EPub

O7F5V3XYA26: Industrial Deployment of System Engineering Methods From Alexander Romanovsky