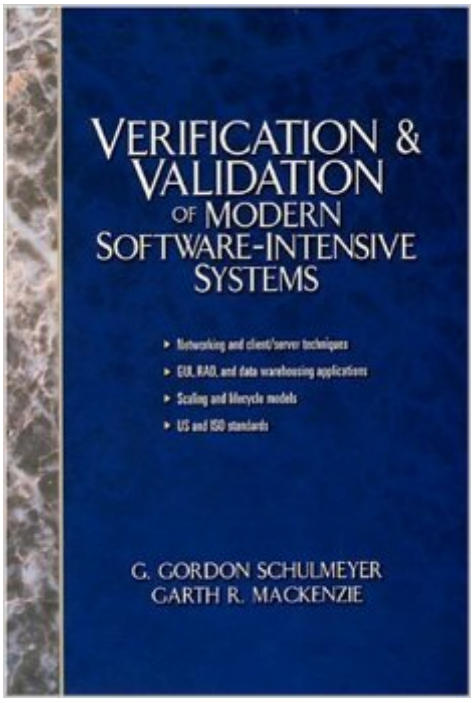
Verification And Validation Of Modern Software-Intensive Systems



Synopsis

Innovative V&V strategies for the hottest new technologies We depend on complex software systems throughout our daily lives, from banking to communications to transportation to medicine. To keep them reliably failure-free, verification and validation methods must be adapted from their roots in the defense and aerospace industries to meet the needs of today's ubiquitous software systems. Verification and Validation of Modern Software-Intensive Systems brings the classic approaches up to date to apply them to contemporary computing methods. Based on the latest standards and research, the authors cover V&V for areas that have not been previously treated collectively, including: *Client/server networks, Internet and intranet applications *Object orientation, knowledge-based systems, and rapid application development *Data warehousing *Graphical User Interface (GUI) development, usability Development processes are also incorporated into the V&V methodology, with an emphasis on the most common life cycle models, the use of CASE tools, and project management using Integrated Product Teams. Case studies offer real-life examples of V&V at work.Much more than just testing or quality assurance,Verification and Validation of Modern Software-Intensive Systems offers a comprehensive and up-to-date guide to complete software reliability.

Book Information

Paperback: 512 pages
Publisher: Prentice Hall; 1 edition (October 2, 2000)
Language: English
ISBN-10: 0130205842
ISBN-13: 978-0130205841
Product Dimensions: 6.9 x 1.1 x 9 inches
Shipping Weight: 2.5 pounds (View shipping rates and policies)
Average Customer Review: 5.0 out of 5 starsÂ Â See all reviewsÂ (1 customer review)
Best Sellers Rank: #2,466,744 in Books (See Top 100 in Books) #55 inÂ Books > Computers & Technology > Programming > Software Design, Testing & Engineering > Quality Control #1044 inÂ Books > Computers & Technology > Computer Science > Systems Analysis & Design #2554 inÂ Books > Computers & Technology > Programming > Software Design, Testing & Engineering > Object-Oriented Design

Customer Reviews

Verification and validation are two important, if often misunderstood, aspects of delivering the big

three: Reliability, Availability and Support. One of the reasons for this is technology has outstripped methods, which is what this book rectifies. V&V is not pre-production testing where the goal is to break the application or product, but is a functional qualification test (also known as user acceptance test or product test), where the goal is to ensure that what you have meets requirement specifications. Specifically, verification answers "did we build the right thing?" and validations answers "did we build it right?"It's one thing to perform V&V for products and monolithic applications and quite another to apply these techniques to more complex systems. This book updates the V&V body of knowledge by showing how to perform V&V in objected-oriented and distributed environments, with an emphasis on specific system types such as data warehouses, inter- and internet systems, etc.The authors start with a description of processes, models and standards that give you a foundation for incorporating V&V, and then discuss tools and methodologies, documentation and metrics. I especially liked the metrics provided, which will allow you to effectively and accurately measure your V&V process.Another strong point about this book is that it addresses objected-oriented methods, which are difficult to verify and validate. Here is a real life example why: a global 50 company bought into a directory-enabled security scheme as the basis for their enterprise security. Such schemes are object-oriented and complex. At no point did the company verify or validate what they were buying into, either as a concept of the component products.

in the Cloud and Beyond: 14th International Conference on Software Reuse, ICSR 2015, Miami, FL, USA, January 4-6, ... (Lecture Notes in Computer Science) Software Reuse: A Holistic Approach (Wiley Series in Software-Based Systems) Verification of Computer Codes in Computational Science and Engineering Logic Design and Verification Using SystemVerilog (Revised) Biometrics: Advanced Identity Verification: The Complete Guide The Independent Farmstead: Growing Soil, Biodiversity, and Nutrient-Dense Food with Grassfed Animals and Intensive Pasture Management