Software Fault Injection

Inoculating Programs Against Errors

Jeffrey M. Voas and Gary McGraw

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Synopsis

This book is the first to describe the unique benefits and challenges associated with fault injection methods. Using real world case-studies and applications data, the authors explain fault injection to the programmer and the developer. CD-ROM includes demo versions of fault injection tools and some basic algorithms for the reader to customize.

Book Information

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Customer Reviews

Voas and McGraw make the case that, to produce reliable software, validation (usually applied as dynamic - or run-time -- testing), is more effective than process. That alone is nothing new -- many software development organizations invest much more in testing than in process improvement. But Software Fault Injection goes further: instead of more and more testing which always seems to miss the failures that the end user seems to find so easily, create those failures. Even (temporarily) create the defects that will cause those failures to happen. Sound strange? It is, but no stranger than what this book explains how to do -- as in the subtitle -- Inoculating Programs Against Errors. The idea is to produce modified, selectively defective copies of the software under test and see how the rest of the system handles the failures that now happen "in the lab" rather than in the field. It works with medical research and produces vaccines. If you're tired of the cycle of code, test, launch, surprise crash in the field, consider whether software failure injection might help.--Full disclosure: I only had time to read the first 10% of the book before I had to move on to other topics. But if and
when I come back to software reliability improvement, this is a book I'll pick up again.

Expected a little bit more from this book, overall a little bit disappointed since I did not learn anything new from it.

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