DTrace: Dynamic Tracing In Oracle Solaris, Mac OS X, And FreeBSD (Oracle Solaris Series)
The Oracle Solaris DTrace feature revolutionizes the way you debug operating systems and applications. Using DTrace, you can dynamically instrument software and quickly answer virtually any question about its behavior. Now, for the first time, there's a comprehensive, authoritative guide to making the most of DTrace in any supported UNIX environment--from Oracle Solaris to OpenSolaris, Mac OS X, and FreeBSD. Written by key contributors to the DTrace community, DTrace teaches by example, presenting scores of commands and easy-to-adapt, downloadable D scripts. These concise examples generate answers to real and useful questions, and serve as a starting point for building more complex scripts. Using them, you can start making practical use of DTrace immediately, whether you're an administrator, developer, analyst, architect, or support professional. The authors fully explain the goals, techniques, and output associated with each script or command. Drawing on their extensive experience, they provide strategy suggestions, checklists, and functional diagrams, as well as a chapter of advanced tips and tricks. You'll learn how to Write effective scripts using DTrace's D language Use DTrace to thoroughly understand system performance Expose functional areas of the operating system, including I/O, filesystems, and protocols Use DTrace in the application and database development process Identify and fix security problems with DTrace Analyze the operating system kernel Integrate DTrace into source code Extend DTrace with other tools This book will help you make the most of DTrace to solve problems more quickly and efficiently, and build systems that work faster and more reliably.
Its finally here, the great masterpiece. This books completes what "Solaris Performance & Tools" started. This new book focuses entirely on DTrace and is really several books rolled into one.

Part I gives you a complete DTrace Textbook. It breaks down the language and introduces you all the foundational concepts. It is brisk and every concept has an example making it extremely accessible.

Part II is the combination of several runbooks and a collection of cookbooks. For CPU, I/O, network, etc there is the same methodical systematic approach to exposing problems that we got in "Performance & Tools" but vastly expanded. After hitting all the fundamental resources it breaks down into various programming languages, databases, applications and daemons. The true value of this book is here in Part II. You may know that you have a certain kind of problem, and you know that DTrace can probly find it for you, but you don't know where to start and in what order to proceed. If you do it on your own you may quickly find yourself overwhelmed and lost in the labyrinth that is the Solaris kernel. This is why the methodical approach Jim and Brendan take is so important, you really don't need to know anything more than you need to dig into some broad problem and the text leads you down the path of elimination and analysis step-by-step.

Part III hits tools, tips, and security. Learn how to spy on users, audit activity, use Apple Instruments or DTrace in NetBeans and lots more. Chapter 13 on tools is a great way to learn about all those tools out there that you may have heard of but aren’t familiar with, or even introduce you to new toys you didn't know existed. But thats not all...

The last book I tried to use while at my computer was the first edition of the O'Reilly behemoth UNIX Power Tools, a small phone book in both page count and page quality. Working through a very large book of very many items front to back, as I did, might seem like a fool's errand. But Power Tools was, and in its third edition must still be, a tirelessly, relentlessly cross-referenced work. I was impressed by the vigor and care its contributors applied to relate so many points of information to each other. Moreover, I was struck by the implication that I could follow suit. It was a breath of
encouragement I was grateful to receive, as I wanted to grow into power user status myself. It was also a gift I think about paying forward when I teach. Like when someone again runs off with my current copy, but in a way that doesn't stress the trust I place in my colleagues. This book on DTrace, a technology for tracing process and operating system behavior, is also quite thick, and filled with many bits of information, hard-won from examining many dark areas of system and process code. The book is, in turns, a meandering journal, a breathless mash-up of contributions, a collection of clipped, man page-style narratives, and a dry series of code and output blocks the authors sometimes deem self-evident. Some clues, such as an oft-repeated warning that the fbt provider is unstable, suggest the book was built by force of compilation alone, with little interest in supporting a read-through, much less a systematic view of the content.

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