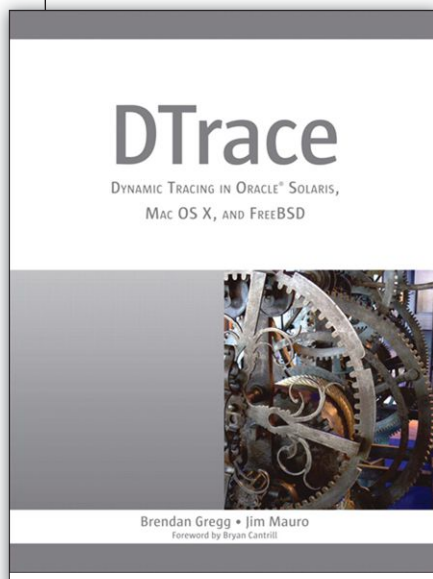


BOOKreview

by Joseph Kong



DTrace: Dynamic Tracing in Oracle Solaris, Mac OS X and FreeBSD

by Brendan Gregg and Jim Mauro

Publisher	<i>Prentice Hall (2011)</i>
Print List Price	\$59.99
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Pages	1,152

My coworkers love DTrace. They constantly extol its ability to root cause bugs. As such, I purchased a copy of *DTrace: Dynamic Tracing in Oracle Solaris, Mac OS X and FreeBSD*, by Brendan Gregg and Jim Mauro, to bring myself up to speed (okay, I was a little jealous of my coworkers' DTrace skills). For the most part I liked *DTrace*, but there were several chapters that were a chore to slog through (more on that later).

The book is organized into three parts. The first part is comprised of two chapters and provides an overview of DTrace. Chapter 1, Introduction to DTrace, describes what exactly DTrace is and how it works. (DTrace is a dynamic tracing framework that lets you observe your system's behavior.) Chapter 2, D Language, describes how to write DTrace scripts and one-liners, detailing the individual components that make up a DTrace script. After reading this part and going through some examples online, I was equipped with enough knowledge to start using DTrace successfully at work.

The second part is comprised of eight chapters, each describing a different area that DTrace can observe. They are:

- Chapter 3, System View
- Chapter 4, Disk I/O
- Chapter 5, File Systems
- Chapter 6, Network Lower-Level Protocols
- Chapter 7, Application-Level Protocols

- Chapter 8, Languages
- Chapter 9, Applications
- Chapter 10, Databases

These chapters are jam-packed with examples and case studies, and I personally love the learn-by-example approach. They make obvious the power of DTrace. But, because most of the content wasn't readily applicable to me and because each chapter is incredibly long, it felt like a grind to read them (I now understand why my editors at No Starch always told me to avoid writing super-long chapters). In my opinion, these chapters work better as reference material.

The third and final part is comprised of four chapters, each describing a topic that didn't fit into the previous two parts. They are:

- Chapter 11, Security, which describes how to apply DTrace for real-time forensics, custom auditing, policy enforcement, and security debugging
- Chapter 12, Kernel, which details how to use DTrace to peer into your operating system's kernel; there's some overlap between this chapter and those in the second part
- Chapter 13, Tools, which describes some tools built using DTrace
- Chapter 14, Tips and Tricks, which provides some insights on how to use DTrace effectively based on the authors' experiences

Again, these chapters are jam-packed with examples. And again, I love this approach. Unlike the second part, however, these chapters are of

reasonable length. As such, the material is digestible.

Overall, *DTrace* is a good book. The first part alone is enough to bring you up to speed, and the third part was a fun read. However, this may not be a book you read cover to cover. The bulk of the book (i.e., the second part) is better served as reference material. (*DTrace* also contains seven appendices, which are obviously designed to be reference material.) ●

JOSEPH KONG is the author of the critically acclaimed *Designing BSD Rootkits* and *FreeBSD Device Drivers*. He is currently a senior software engineer for Dell EMC's Isilon division. For more information about Joseph Kong visit www.thestackframe.org or follow him on Twitter @JosephJKong.

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