Windows Internals, Part 1 (Developer Reference)
Synopsis

Delve inside Windows architecture and internals—and see how core components work behind the scenes. Led by three renowned internals experts, this classic guide is fully updated for Windows 7 and Windows Server 2008 R2 and now presents its coverage in two volumes. As always, you get critical insider perspectives on how Windows operates. And through hands-on experiments, you'll experience its internal behavior firsthand—knowledge you can apply to improve application design, debugging, system performance, and support. In Part 1, you will: Understand how core system and management mechanisms work—including the object manager, synchronization, Wow64, Hyper-V, and the registry Examine the data structures and activities behind processes, threads, and jobs Go inside the Windows security model to see how it manages access, auditing, and authorization Explore the Windows networking stack from top to bottom—including APIs, BranchCache, protocol and NDIS drivers, and layered services Dig into internals hands-on using the kernel debugger, performance monitor, and other tools

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Customer Reviews

Having been a fan of Mark Russinovich’s for some time now, I always look forward to new editions of the Windows Internals book. I own the fourth and fifth editions, and a week ago I purchased the sixth edition, which is now released in two parts. Part 1 is the subject of this review. Since I also own the fifth edition of this work, I was able to review both editions side-by-side and the differences are not significant. The sixth edition expands a little more on some topics, but IMHO there is not a whole lot of new information considering the incremental nature of the upgrade from Windows 6.0 to 6.1, and the minor differences between the Windows 6.0 (Vista and Server 2008) and Windows 6.1 (Windows 7 and Server 2008 R2) kernels.

Part 1 prepares the reader by explaining basic concepts and giving an overview of Windows system architecture. It then addresses System Mechanisms, such as Trap Dispatching and the Image Loader, and Management Mechanisms, such as the Registry, and Windows Services. It then deals with Processes, Threads and Jobs in detail, before concluding with treatments of Security, and finally Networking. Additionally, to enhance understanding, explanations are bolstered by practical, hands-on experiments. Part 2, however, contains some of my favorite topics, but this volume won’t be available until later this fall. These topics include Input/Output, Storage Management, Memory Management, File Systems, and the Startup and Shutdown Process. I guess I will have to wait for the release of Part 2 to review these. As far as ratings go, I give this sixth edition of Windows Internals the same five-star rating as its predecessor.

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