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What is the architecture of Linux?

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Q. Can you explain the architecture of Linux kernel?

A. Linus Torvalds wrote the first Linux kernel way back in 1991. Linux is a monolithic kernel. It supports:

- => Preemptive multitasking (both in user mode and kernel mode)
- => Virtual memory
- => Shared libraries
- => On Demand loading
- => Shared copy-on-write executables
- => Memory management
- => The Internet protocol suite and networking
- => Threading
- => Inter-Process Communication
- => Virtual File System and much more



[1]

Discussion related to Linux architecture is beyond the scope of this FAQ section. I recommend following books and resources for more information:

- [Linux Kernel in a Nutshell](#) ^[2] - free (Creative Commons license) downloadable book on the Linux kernel
- [Kernel.org](#) ^[3] - Basic Linux kernel documentation and source code
- [LWN kernel info pages](#) ^[4] This index covers articles published in the LWN.net Kernel Page.
- [Understanding the Linux Kernel \[ILLUSTRATED\]](#) ^[5] - This book explains the inner workings of the current 2.6 Linux kernel. I highly recommend this book. You'll learn what conditions bring out Linux's best performance, and you'll see how it meets the challenge of providing good system response during process scheduling, file access, and memory management in a wide variety of environments. This book will help you make the most of your Linux system.

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URLs in this post:

[1] Image: <http://www.cyberciti.biz/faq/faq/category/linux/>

[2] Linux Kernel in a Nutshell: <http://www.kroah.com/lkn/>

[3] Kernel.org: <http://www.kernel.org/pub/linux/docs/lkml/>

[4] LWN kernel info pages: <http://lwn.net/Kernel/>

[5] Understanding the Linux Kernel [ILLUSTRATED]: [http://www.amazon.com/gp/redirect.html?](http://www.amazon.com/gp/redirect.html?ie=UTF8&location=http://www.amazon.com/Understanding-Linux-Kernel-Daniel-Bovet%2Fdp%2F0596005652%3Fie%3DUTF8%26s%3Dbooks%26qid%3D1180806400%26sr%3D8-1&tag=cyberciti-20&linkCode=ur2&camp=1789&creative=9325)

[ie=UTF8&location=http://www.amazon.com/Understanding-Linux-Kernel-Daniel-Bovet%2Fdp%2F0596005652%3Fie%3DUTF8%26s%3Dbooks%26qid%3D1180806400%26sr%3D8-1&tag=cyberciti-20&linkCode=ur2&camp=1789&creative=9325](http://www.amazon.com/Understanding-Linux-Kernel-Daniel-Bovet%2Fdp%2F0596005652%3Fie%3DUTF8%26s%3Dbooks%26qid%3D1180806400%26sr%3D8-1&tag=cyberciti-20&linkCode=ur2&camp=1789&creative=9325)