Essential Linux
Device Drivers

Essential Linux Device Drivers

Chris Simmonds

Essential Linux Device Drivers:

Essential Linux Device Drivers Sreekrishnan Venkateswaran,2008-03-27 Probably the most wide ranging and complete Linux device driver book I ve read Alan Cox Linux Guru and Key Kernel Developer Very comprehensive and detailed covering almost every single Linux device driver type Theodore Ts o First Linux Kernel Developer in North America and Chief Platform Strategist of the Linux Foundation The Most Practical Guide to Writing Linux Device Drivers Linux now offers an exceptionally robust environment for driver development with today s kernels what once required years of development time can be accomplished in days In this practical example driven book one of the world s most experienced Linux driver developers systematically demonstrates how to develop reliable Linux drivers for virtually any device Essential Linux Device Drivers is for any programmer with a working knowledge of operating systems and C including programmers who have never written drivers before Sreekrishnan Venkateswaran focuses on the essentials bringing together all the concepts and techniques you need while avoiding topics that only matter in highly specialized situations Venkateswaran begins by reviewing the Linux 2 6 kernel capabilities that are most relevant to driver developers He introduces simple device classes then turns to serial buses such as I2C and SPI external buses such as PCMCIA PCI and USB video audio block network and wireless device drivers user space drivers and drivers for embedded Linux one of today s fastest growing areas of Linux development For each Venkateswaran explains the technology inspects relevant kernel source files and walks through developing a complete example Addresses drivers discussed in no other book including drivers for I2C video sound PCMCIA and different types of flash memory Demystifies essential kernel services and facilities including kernel threads and helper interfaces Teaches polling asynchronous notification and I O control Introduces the Inter Integrated Circuit Protocol for embedded Linux drivers Covers multimedia device drivers using the Linux Video subsystem and Linux Audio framework Shows how Linux implements support for wireless technologies such as Bluetooth Infrared WiFi and cellular networking Describes the entire driver development lifecycle through debugging and maintenance Includes reference appendixes covering Linux assembly BIOS calls and Seq files   **Essential Linux Device Drivers** Sreekrishnan Venkateswaran,2008 Essential Linux Device Drivers Venkateswaran,1900 This is the eBook version of the printed book If the print book includes a CD ROM this content is not included within the eBook version The Most Practical Guide to Writing Linux Device Drivers Linux now offers an exceptionally robust environment for driver development with today s kernels what once required years of development time can now be accomplished in days In this practical example driven book one of the world s most experienced Linux driver developers systematically demonstrates how to develop reliable Linux drivers for virtually any device Essential Linux Device Dri   **Easy Linux Device Driver, Second Edition** Mahesh Sambhaji Jadhav,2014-03-13 Easy Linux Device Driver First Step Towards Device Driver Programming Easy Linux Device Driver book is an easy and friendly way of learning device driver programming Book contains all latest programs along with output screen screenshots

Highlighting important sections and stepwise approach helps for quick understanding of programming Book contains Linux installation Hello world program up to USB 3 0 Display Driver PCI device driver programming concepts in stepwise approach Program gives best understanding of theoretical and practical fundamentals of Linux device driver Beginners should start learning Linux device driver from this book to become device driver expertise Topics covered Introduction of Linux Advantages of Linux History of Linux Architecture of Linux Definations Ubuntu installation Ubuntu Installation Steps User Interface Difference About KNOPPIX Important links Terminal Soul of Linux Creating Root account Terminal Commands Virtual Editor Commands Linux Kernel Linux Kernel Internals Kernel Space and User space Device Driver Place of Driver in System Device Driver working Characteristics of Device Driver Module Commands Hello World Program pre settings Write Program Printk function Makefile Run program Parameter passing Parameter passing program Parameter Array Process related program Process related program Character Device Driver Major and Minor number API to registers a device Program to show device number Character Driver File Operations File operation program Include h header Functions in module h file Important code snippets Summary of file operations PCI Device Driver Direct Memory Access Module Device Table Code for Basic Device Driver Important code snippets USB Device Driver Fundamentals Architecture of USB device driver USB Device Driver program Structure of USB Device Driver Parts of USB end points Importent features USB information Driver USB device Driver File Operations Using URB Simple data transfer Program to read and write Important code snippets Gadget Driver Complete USB Device Driver Program Skeleton Driver Program Special USB 3 0 USB 3 0 Port connection Bulk endpoint streaming Stream ID Device Driver Lock Mutual Exclusion Semaphore Spin Lock Display Device Driver Frame buffer concept Framebuffer Data Structure Check and set Parameter Accelerated Method Display Driver summary Memory Allocation Kmalloc Vmalloc Ioremap Interrupt Handling interrupt registration Proc interface Path of interrupt Programming Tips Softirqs Tasklets Work Queues I O Control Introducing ioctl Prototype Stepwise execution of ioctl Sample Device Driver Complete memory Driver Complete Parallel Port Driver Device Driver Debugging Data Display Debugger Graphical Display Debugger Kernel Graphical Debugger Appendix I Exported Symbols Kobjects Ksets and Subsystems DMA I O   Linux Kernel Programming Part 2 - Char Device Drivers and Kernel Synchronization Kaiwan N Billimoria,2021-03-19 Discover how to write high quality character driver code interface with userspace work with chip memory and gain an in depth understanding of working with hardware interrupts and kernel synchronization Key FeaturesDelve into hardware interrupt handling threaded IRQs tasklets softirqs and understand which to use whenExplore powerful techniques to perform user kernel interfacing peripheral I O and use kernel mechanismsWork with key kernel synchronization primitives to solve kernel concurrency issuesBook Description Linux Kernel Programming Part 2 Char Device Drivers and Kernel Synchronization is an ideal companion guide to the Linux Kernel Programming book This book provides a comprehensive introduction for those new to Linux device driver development and will have you up and running with writing

misc class character device driver code on the 5 4 LTS Linux kernel in next to no time You ll begin by learning how to write a simple and complete misc class character driver before interfacing your driver with user mode processes via procfs sysfs debugfs netlink sockets and ioctl You ll then find out how to work with hardware I O memory The book covers working with hardware interrupts in depth and helps you understand interrupt request IRQ allocation threaded IRQ handlers tasklets and softirqs You ll also explore the practical usage of useful kernel mechanisms setting up delays timers kernel threads and workqueues Finally you ll discover how to deal with the complexity of kernel synchronization with locking technologies mutexes spinlocks and atomic refcount operators including more advanced topics such as cache effects a primer on lock free techniques deadlock avoidance with lockdep and kernel lock debugging techniques By the end of this Linux kernel book you ll have learned the fundamentals of writing Linux character device driver code for real world projects and products What you will learnGet to grips with the basics of the modern Linux Device Model LDM Write a simple yet complete misc class character device driverPerform user kernel interfacing using popular methodsUnderstand and handle hardware interrupts confidentlyPerform I O on peripheral hardware chip memoryExplore kernel APIs to work with delays timers kthreads and workqueuesUnderstand kernel concurrency issuesWork with key kernel synchronization primitives and discover how to detect and avoid deadlockWho this book is for An understanding of the topics covered in the Linux Kernel Programming book is highly recommended to make the most of this book This book is for Linux programmers beginning to find their way with device driver development Linux device driver developers looking to overcome frequent and common kernel driver development issues as well as perform common driver tasks such as user kernel interfaces performing peripheral I O handling hardware interrupts and dealing with concurrency will benefit from this book A basic understanding of Linux kernel internals and common APIs kernel module development and C programming is required   **Mastering Embedded Linux Development** Frank Vasquez,Chris Simmonds,2025-05-27 Written by Frank Vasquez an embedded Linux expert this new edition enables you to harness the full potential of Linux to create versatile and robust embedded solutions All formats include a free PDF and an invitation to the Embedded System Professionals community Key Features Learn how to develop and configure reliable embedded Linux devices Discover the latest enhancements in Linux 6 6 and the Yocto Project 5 0 codename Scarthgap Explore different ways to debug and profile your code in both user space and the Linux kernel Purchase of the print or Kindle book includes a free PDF eBook Book DescriptionMastering Embedded Linux Development is designed to be both a learning resource and a reference for your embedded Linux projects In this fourth edition you ll learn the fundamental elements that underpin all embedded Linux projects the toolchain the bootloader the kernel and the root filesystem First you will download and install a pre built toolchain After that you will cross compile each of the remaining three elements from scratch and learn to automate the process using Buildroot and the Yocto Project The book progresses with coverage of over the air software updates and rapid prototyping with add on boards Two new chapters tackle modern

development practices including Python packaging and deploying containerized applications These are followed by a chapter on writing multithreaded code and another on techniques to manage memory efficiently The final chapters demonstrate how to debug your code whether it resides in user space or in the Linux kernel itself In addition to GNU debugger GDB the book also covers the different tracers and profilers that are available for Linux so that you can quickly pinpoint any performance bottlenecks in your system By the end of this book you will be able to create efficient and secure embedded devices with Linux that will delight your users What you will learn Cross compile embedded Linux images with Buildroot and Yocto Enable Wi Fi and Bluetooth connectivity with a Yocto board support package Update IoT devices securely in the field with Mender or balena Prototype peripheral additions by connecting add on boards reading schematics and coding test programs Deploy containerized software applications on edge devices with Docker Debug devices remotely using GDB and measure the performance of systems using tools like perf and ply Who this book is for If you are a systems software engineer or system administrator who wants to learn how to apply Linux to embedded devices then this book is for you The book is also for embedded software engineers accustomed to programming low power microcontrollers and will help them make the leap to a high speed system on chips that can run Linux Anyone who develops hardware for Linux will find something useful in this book But before you get started you will need a solid grasp of the POSIX standard C programming and shell scripting

Professional Linux Kernel Architecture Wolfgang Mauerer,2010-03-11 Find an introduction to the architecture concepts and algorithms of the Linux kernel in Professional Linux Kernel Architecture a guide to the kernel sources and large number of connections among subsystems Find an introduction to the relevant structures and functions exported by the kernel to userland understand the theoretical and conceptual aspects of the Linux kernel and Unix derivatives and gain a deeper understanding of the kernel Learn how to reduce the vast amount of information contained in the kernel sources and obtain the skills necessary to understand the kernel sources **Mastering Embedded Linux Programming** Chris Simmonds,2017-06-30 Learn to confidently develop debug and deploy robust embedded Linux systems with hands on examples using BeagleBone and QEMU Key Features Step by step guide from toolchain setup to real time programming with hands on implementation Practical insights on kernel configuration device drivers and memory management Covers hardware integration using BeagleBone Black and virtual environments via QEMU Book DescriptionEmbedded Linux runs many of the devices we use every day from smart TVs to WiFi routers test equipment to industrial controllers all of them have Linux at their heart Linux is a core technology in the implementation of the inter connected world of the Internet of Things You will begin by learning about the fundamental elements that underpin all embedded Linux projects the toolchain the bootloader the kernel and the root filesystem You ll see how to create each of these elements from scratch and how to automate the process using Buildroot and the Yocto Project Moving on you ll find out how to implement an effective storage strategy for flash memory chips and how to install updates to the device remotely once it is deployed You ll also get to know

the key aspects of writing code for embedded Linux such as how to access hardware from applications the implications of writing multi threaded code and techniques to manage memory in an efficient way The final chapters show you how to debug your code both in applications and in the Linux kernel and how to profile the system so that you can look out for performance bottlenecks By the end of the book you will have a complete overview of the steps required to create a successful embedded Linux system What you will learn Evaluate the Board Support Packages offered by most manufacturers of a system on chip or embedded module Use Buildroot and the Yocto Project to create embedded Linux systems quickly and efficiently Update IoT devices in the field without compromising security Reduce the power budget of devices to make batteries last longer Interact with the hardware without having to write kernel device drivers Debug devices remotely using GDB and see how to measure the performance of the systems using powerful tools such as perk ftrace and valgrind Who this book is for This book is for embedded engineers Linux developers and computer science students looking to build real world embedded systems It suits readers who are familiar with basic Linux use and want to deepen their skills in kernel configuration debugging and device integration   *Linux Device Drivers* Jonathan Corbet,Alessandro Rubini,Greg Kroah-Hartman,2005-02-07 Device drivers literally drive everything you re interested in disks monitors keyboards modems everything outside the computer chip and memory And writing device drivers is one of the few areas of programming for the Linux operating system that calls for unique Linux specific knowledge For years now programmers have relied on the classic Linux Device Drivers from O Reilly to master this critical subject Now in its third edition this bestselling guide provides all the information you ll need to write drivers for a wide range of devices Over the years the book has helped countless programmers learn how to support computer peripherals under the Linux operating system how to develop and write software for new hardware under Linux the basics of Linux operation even if they are not expecting to write a driver The new edition of Linux Device Drivers is better than ever The book covers all the significant changes to Version 2 6 of the Linux kernel which simplifies many activities and contains subtle new features that can make a driver both more efficient and more flexible Readers will find new chapters on important types of drivers not covered previously such as consoles USB drivers and more Best of all you don t have to be a kernel hacker to understand and enjoy this book All you need is an understanding of the C programming language and some background in Unix system calls And for maximum ease of use the book uses full featured examples that you can compile and run without special hardware Today Linux holds fast as the most rapidly growing segment of the computer market and continues to win over enthusiastic adherents in many application areas With this increasing support Linux is now absolutely mainstream and viewed as a solid platform for embedded systems If you re writing device drivers you ll want this book In fact you ll wonder how drivers are ever written without it   Debugging Linux Systems (Digital Short Cut) Sreekrishnan Venkateswaran,2009-11-03 Debugging Linux Systems discusses the main tools available today to debug 2 6 Linux Kernels We start by exploring the seemingly esoteric operations of the Kernel Debugger KDB Kernel GNU DeBugger KGDB the plain

GNU DeBugger GDB and JTAG debuggers We then investigate Kernel Probes a feature that lets you intrude into a kernel function and extract debug information or apply a medicated patch Analyzing a crash dump can yield clues for postmortem analysis of kernel crashes or hangs so we take a look at Kdump a serviceability tool that collects a system dump after spawning a new kernel Profiling points you to code regions that burn more CPU cycles so we learn to use the OProfile kernel profiler and the gprof application profiler to sense the presence of code bottlenecks Because tracing provides insight into behavioral problems that manifest during interactions between different code modules we delve into the Linux Trace Toolkit a system designed for high volume trace capture The section Debugging Embedded Linux takes a tour of the I O interfaces commonly found on embedded hardware such as flash memory serial port PCMCIA Secure Digital media USB RTC audio video touch screen and Bluetooth and provides pointers to debug the associated device drivers We also pick up some board level debugging skills with the help of a case study The section Debugging Network Throughput takes you through some device driver design issues and protocol implementation characteristics that can affect the horsepower of your network interface card We end the shortcut by examining several options available in the kernel configuration menu that can emit valuable debug information   Essential Linux Commands Paul Olushile,2023-11-30 Unlock the power of Linux with this quick start guide to leveling up your admin skills packed with clear explanations and hands on examples Key Features Explore Linux commands for mounting file manipulation and running Linux on the cloud Learn commands for checking and configuring network card statistics firewall rules and interfaces Understand how to utilize SELinux in keeping systems adequately hardened and avoiding various security risks Purchase of the print or Kindle book includes a free PDF eBook Book DescriptionThe role of a system administrator is ever evolving with the Linux command line at its core This makes Linux command line mastery an essential skill to demonstrate your ability to efficiently manage and maintain systems efficiently Essential Linux Commands addresses a diverse range of topics including package management file manipulation networking strategies system monitoring and diagnostic tools Each command is intricately explained to eliminate any ambiguity ensuring ease of implementation in real world scenarios This book explains how to use SELinux to maintain security run Linux machines on AWS Cloud and transfer and download files to remote systems With the help of practical examples and use cases you ll not only gain a thorough understanding of a command s syntax but also grasp its functional breadth and limitations The book also explores commands frequently used by system administrators to check network card statistics and firewall rules Whether you re a beginner or an experienced administrator this book is an invaluable resource filling in the gaps in your skill set and helping you improve your skills and expertise in Linux administration What you will learn Execute commands to launch applications control services and change network settings Develop your skills to use commands for package management file manipulation and networking Get clear explanations and practical examples for each command Discover tips and techniques to use the Linux command line effectively Get to grips with troubleshooting

common problems and fixing errors Master best practices to manage and maintain Linux systems Develop expertise in system performance security and Linux in the cloud Who this book is forThis book is for system administrators IT professionals and students who want to enhance their knowledge of Linux administration and improve their skills in this field Whether you re just starting out in system administration or have years of experience this book is an invaluable resource for mastering the Linux command line and becoming a more proficient system administrator Essential Linux Commands is also well suited for individuals interested in expanding their Linux know how and its applications in various industries and environments **Essential Linux fast** Ian Chivers,2012-12-06 Linux has become increasingly popular as an alternative operating system to Microsoft Windows as its ease of installation and use has improved This combined with an ever growing range of applications makes it an attractive alternative to Windows for many people Essential Linux fast covers areas such as The essential preliminaries that should be carried out before installing Linux Installing a Linux system Configuring peripherals Using X windows Basic and intermediate Unix commands Using the Internet with Linux Using Linux for document preparation Using Linux for programming If you want to make the switch from Windows this is the book you need Ian Chivers tells you how to get and install Linux and explains why Linux is becoming the hottest operating system of the millennium **Linux for Embedded and Real-time Applications** Doug Abbott,2012-12-17 This new edition of Linux for Embedded and Real Time Applications provides a practical introduction to the basics and the latest developments in this rapidly evolving technology Ideal for those new to using Linux in an embedded environment it takes a hands on approach and covers key concepts plus specific applications Key features include Substantially updated to focus on a specific ARM based single board computer SBC as a target for embedded application programming Includes an introduction to Android programming With this book you will learn The basics of Open Source Linux and the embedded space How to set up a simple system and tool chain How to use simulation for initial application testing Network graphics and Android programming How to use some of the many Linux components and tools How to configure and build the Linux kernel BusyBox and U Boot bootloader Provides a hands on introduction for engineers and software developers who need to get up to speed quickly on embedded Linux its operation and its capabilities including Android Updated and changed accompanying tools with a focus on the author s specially developed Embedded Linux Learning Kit **Embedded Linux Primer** Christopher Hallinan,2010-10-26 Up to the Minute Complete Guidance for Developing Embedded Solutions with Linux Linux has emerged as today s 1 operating system for embedded products Christopher Hallinan s Embedded Linux Primer has proven itself as the definitive real world guide to building efficient high value embedded systems with Linux Now Hallinan has thoroughly updated this highly praised book for the newest Linux kernels capabilities tools and hardware support including advanced multicore processors Drawing on more than a decade of embedded Linux experience Hallinan helps you rapidly climb the learning curve whether you re moving from legacy environments or you re new to embedded programming Hallinan

addresses today s most important development challenges and demonstrates how to solve the problems you re most likely to encounter You ll learn how to build a modern efficient embedded Linux development environment and then utilize it as productively as possible Hallinan offers up to date guidance on everything from kernel configuration and initialization to bootloaders device drivers to file systems and BusyBox utilities to real time configuration and system analysis This edition adds entirely new chapters on UDEV USB and open source build systems Tour the typical embedded system and development environment and understand its concepts and components Understand the Linux kernel and userspace initialization processes Preview bootloaders with specific emphasis on U Boot Configure the Memory Technology Devices MTD subsystem to interface with flash and other memory devices Make the most of BusyBox and latest open source development tools Learn from expanded and updated coverage of kernel debugging Build and analyze real time systems with Linux Learn to configure device files and driver loading with UDEV Walk through detailed coverage of the USB subsystem Introduces the latest open source embedded Linux build systems Reference appendices include U Boot and BusyBox commands **Android System Programming** Roger Ye,2017-05-31 Build customize and debug your own Android system Key Features Master Android system level programming by integrating customizing and extending popular open source projects Use Android emulators to explore the true potential of your hardware Master key debugging techniques to create a hassle free development environment Book DescriptionAndroid system programming involves both hardware and software knowledge to work on system level programming The developers need to use various techniques to debug the different components in the target devices With all the challenges you usually have a deep learning curve to master relevant knowledge in this area This book will not only give you the key knowledge you need to understand Android system programming but will also prepare you as you get hands on with projects and gain debugging skills that you can use in your future projects You will start by exploring the basic setup of AOSP and building and testing an emulator image In the first project you will learn how to customize and extend the Android emulator Then you ll move on to the real challenge building your own Android system on VirtualBox You ll see how to debug the init process resolve the bootloader issue and enable various hardware interfaces When you have a complete system you will learn how to patch and upgrade it through recovery Throughout the book you will get to know useful tips on how to integrate and reuse existing open source projects such as LineageOS CyanogenMod Android x86 Xposed and GApps in your own system What you will learn Set up the Android development environment and organize source code repositories Get acquainted with the Android system architecture Build the Android emulator from the AOSP source tree Find out how to enable WiFi in the Android emulator Debug the boot up process using a customized Ramdisk Port your Android system to a new platform using VirtualBox Find out what recovery is and see how to enable it in the AOSP build Prepare and test OTA packages Who this book is for This book is for Android system programmers and developers who want to use Android and create indigenous projects with it You should know the

important points about the operating system and the C C programming language *Mastering Embedded Linux Programming* Frank Vasquez,Chris Simmonds,2021-05-14 Build customize and deploy Linux based embedded systems with confidence using Yocto bootloaders and build tools Key Features Master build systems toolchains and kernel integration for embedded Linux Set up custom Linux distros with Yocto and manage board specific configurations Learn real world debugging memory handling and system performance tuning Book DescriptionIf you re looking for a book that will demystify embedded Linux then you ve come to the right place Mastering Embedded Linux Programming is a fully comprehensive guide that can serve both as means to learn new things or as a handy reference The first few chapters of this book will break down the fundamental elements that underpin all embedded Linux projects the toolchain the bootloader the kernel and the root filesystem After that you will learn how to create each of these elements from scratch and automate the process using Buildroot and the Yocto Project As you progress the book will show you how to implement an effective storage strategy for flash memory chips and install updates to a device remotely once it s deployed You ll also learn about the key aspects of writing code for embedded Linux such as how to access hardware from apps the implications of writing multi threaded code and techniques to manage memory in an efficient way The final chapters demonstrate how to debug your code whether it resides in apps or in the Linux kernel itself You ll also cover the different tracers and profilers that are available for Linux so that you can quickly pinpoint any performance bottlenecks in your system By the end of this Linux book you ll be able to create efficient and secure embedded devices using Linux What you will learn Use Buildroot and the Yocto Project to create embedded Linux systems Troubleshoot BitBake build failures and streamline your Yocto development workflow Update IoT devices securely in the field using Mender or balena Prototype peripheral additions by reading schematics modifying device trees soldering breakout boards and probing pins with a logic analyzer Interact with hardware without having to write kernel device drivers Divide your system up into services supervised by BusyBox runit Debug devices remotely using GDB and measure the performance of systems using tools such as perf ftrace eBPF and Callgrind Who this book is for If you re a systems software engineer or system administrator who wants to learn how to implement Linux on embedded devices then this book is for you It s also aimed at embedded systems engineers accustomed to programming for low power microcontrollers who can use this book to help make the leap to high speed systems on chips that can run Linux Anyone who develops hardware that needs to run Linux will find something useful in this book but before you get started you ll need a solid grasp on POSIX standard C programming and shell scripting **Embedded Visual System and Its Applications on Robots** De Xu,2010 Annotation Embedded vision systems such as smart cameras have been rapidly developed recently Vision systems have become smaller and lighter but their performance has improved The algorithms in embedded vision systems have their specifications limited by frequency of CPU memory size and architecture The goal of this e book is to provide a an advanced reference work for engineers researchers and scholars in the field of robotics machine vision and

automation and to facilitate the exchange of their ideas experiences and views on embedded vision system models The effectiveness for all methods is emphasized in a practical sense for systems presented in this e book **Embedded Operating Systems** Alan Holt,Chi-Yu Huang,2014-10-08 This practically oriented textbook provides a clear introduction to the different component parts of an operating system and how these work together The easy to follow text covers the bootloader kernel filesystem shared libraries start up scripts configuration files and system utilities The procedure for building each component is described in detail guiding the reader through the process of creating a fully functional GNU Linux embedded OS Features presents a concise overview of the GNU Linux system and a detailed review of GNU Linux filesystems describes how to build an embedded system to run on a virtual machine and to run natively on an actual processor introduces the concept of the compiler toolchain demonstrating how to develop a cross toolchain so that programs can be built on a range of different architectures discusses the ARM based platforms BeagleBone and Raspberry Pi explains how to build OpenWRT firmware images for OMxP Open mesh devices and the Dragino MS14 series **Linux Device Drivers** Alessandro Rubini,Jonathan Corbet,2001 Provides hands on information on writing device drivers for the Linux system with particular focus on the features of the 2 4 kernel and its implementation **Essential Linux** Steve Heath,1997 Essential Linux addresses and provides the essential information for getting a Linux system up and running looking after it and using it It includes many screen shots and examples of essential commands and utilities This book focuses on practical installations such as converting IBM PCs transferring data from Windows and MS DOS and running Linux in conjunction with Windows Provides detailed instructions and advice on installation for many different systems and environments By author of UNIX Pocket Book which was chosen by PC Magazine as a recommended UNIX book CD ROM contains Versions 1 3 and 2 0 of Linux with installation details

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Essential Linux Device Drivers Introduction

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