دوره آموزشی LPIC | دوره ۱LPIC

دوره ۱ LPIC لینوکس | Linux: System Administrator

مروری بر دوره

مدرک ۱-LPIC اولین مدرک از مجموعه مدارک حرفه‌ای سطح‌بندی شده LPI لینوکس است. این مدرک صلاحیت داوطلب را در زمینه اداره کردن امور مرتبط با تعمیر و نگهداری از طریق خط فرمان (command line)، نصب و پیکربندی یک کامپیوتر با سیستم‌عامل لینوکس و در نهایت تنظیمات اولیه مرتبط با شبکه، تایید می‌کند. چنانچه با لینوکس و دوره‌های آموزشی آن از قبل آشنایی نداشته و به تازگی قصد ورود به این حوزه را دارید، توصیه می کنیم ابتدا راهنمای شروع دوره‌های آموزش Linux را مطالعه کنید.
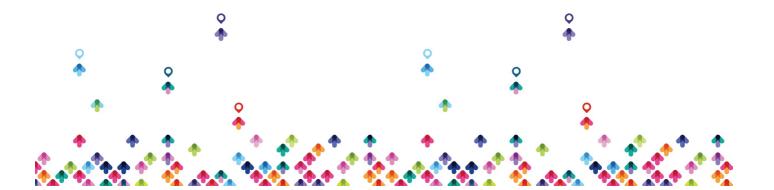
دانلود نقشه راه مدارک لینوکس

مدرک ۱-LPIC برای انعکاس پژوهش‌های حال حاضر و تایید مهارت داوطلبین در دنیای حقیقی (مدیریت سیستم‌ها) طراحی شده است.

آنچه در این دوره خواهید آموخت

- آگاهی از معماری سیستم لینوکس
- نصب و نگهداری Linux workstation، که شامل X۱۱ و راه اندازی آن به عنوان یک client شبکه می شود
- کار با خط فرمان، که شامل دستورات نام آشنا GNU و Unix می شود
- مدیرین فایل ها، مجوزهای دسترسی و همچنین امنیت سیستم
- انجام امور ابتدایی مرتبط با تعمیر و نگهداری همچون: کمک به کاربران، افزودن کاربران به یک سیستم بزرگ، پشتیبان گیری و بازیابی، خاموش کردن و راه اندازی مجدد

سرفصل ها

- Linux Fundamentals
  - Unix and its Design Principles
  - FSF and GNU
  - GPL – General Public License
  - The Linux Kernel
  - Components of a Distribution
  - Red Hat Linux Products
  - SUSE Linux Products
  - Debian
  - Ubuntu
  - Logging In
  - got root?
  - Switching User Contexts
  - Gathering Login Session Info
- Lab Tasks
  - Login and Discovery
  - Switching Users With su
- Work on the Command Line Lab Tasks
  - LPI Objectives Covered
  - Role of Command Shell
  - Shells
  - Gathering System Info
  - Identifying the Shell
  - Changing the Shell
  - Bourne sh: Prompts
  - bash: Bourne-Again Shell

- Help from Commands and Documentation
- Getting Help with man & info
- bash: Command Line History
- bash: Command Editing
- bash: Command Completion
- Shell and Environment Variables
- Key Environment Variables
- Help with Commands
- Linux Shells
- Shell Variables
- Bash History
- Aliases

- Use Streams, Pipes, and Redirects Lab Tasks
  - LPI Objectives Covered
  - File Redirection
  - Piping Commands Together
  - Filename Matching
  - File Globbing and Wildcard Patterns
  - Brace Expansion
  - General Quoting Rules
  - Nesting Commands
  - Multiple and Multi-line Commands
  - Gotchas: Maximum Command Length
  - Connecting Commands
  - Wildcard File Matching
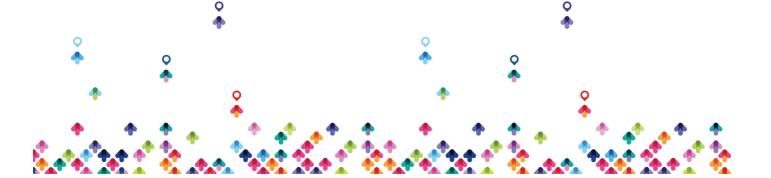 - Shell Meta-Characters

- Command Substitution
- Manage File Permissions and Ownership Lab Tasks
  - LPI Objectives Covered
  - Filesystem Hierarchy Standard
  - Navigating the Filesystem
  - Displaying Directory Contents
  - Filesystem Structures
  - Determining Disk Usage With df and du
  - File Ownership
  - Default Group Ownership
  - File and Directory Permissions
  - File Creation Permissions with umask
  - Changing File Permissions
  - SUID and SGID on files
  - SGID and Sticky Bit on Directories
  - User Private Group Scheme
  - Navigating Directories and Listing Files
  - Disk and Filesystem Usage
  - File and Directory Ownership and Permissions
- Create, Delete, Find, and Display Files Lab Tasks
  - LPI Objectives Covered
  - Directory Manipulation
  - File Manipulation
  - Deleting and Creating Files
  - Physical Unix File Structure
  - Filesystem Links

- File Extensions and Content
- Displaying Files
- Previewing Files
- Displaying Binary Files
- Which and Type
- whereis
- Searching the Filesystem
- Alternate Search Method
- Manually Installed Shared Libraries
- Manipulating Files and Directories

- Work with Archives and Compression Lab Tasks
  - LPI Objectives Covered
  - Archives with tar
  - Archives with cpio
  - The gzip Compression Utility
  - The bzip۲ Compression Utility
  - The PKZIP Archiving/Compression format
  - Archiving and Compression
  - Using tar and cpio for Backups
- Process Text Streams Using Filters Lab Tasks
  - LPI Objectives Covered
  - Producing File Statistics
  - The Streaming Editor
  - Text Processing with awk
  - Replacing Text Characters
  - Text Sorting

- Duplicate Removal Utility
- Extracting Columns of Text
- Combining Files and Merging Text
- Text Processing
- Processing Text Streams

- Search Text Files Using Regular Expressions Lab Tasks
  - LPI Objectives Covered
  - Searching Inside Files
  - Regular Expression Overview
  - Regular Expressions
  - RE Character Classes
  - RE Quantifiers
  - RE Parenthesis
  - Pattern Matching with Regular Expressions
  - Extended Regular Expressions
  - Using Regular Expressions With sed

- Perform Basic File Editing Operations Using vi Lab Tasks
  - LPI Objectives Covered
  - Text Editing
  - vi and Vim
  - Learning vi
  - Basic vi
  - Intermediate vi
  - Text Editing with Vim

- Create, Monitor, and Kill Processes Lab Tasks
  - LPI Objectives Covered

- What is a Process?
- Process Lifecycle
- Process States
- Viewing Processes
- Signals
- Tools to Send Signals
- Job Control Overview
- Job Control Commands
- nohup and disown
- Managing Processes
- Tuning Process Scheduling
- uptime
- Job Control Basics
- Process Management and Job Control Basics

- Use RPM, YUM, and Debian Package Management Lab Tasks
  - LPI Objectives Covered
  - Managing Software
  - RPM Architecture
  - Working With RPMs
  - Querying and Verifying with rpm
  - Installing Debian Packages
  - Querying and Verifying with dpkg
  - The alien Package Conversion Tool
  - Managing Software Dependencies
  - Using the YUM command
  - yumdownloader

- Configuring YUM
- The dselect & APT Frontends to dpkg
- Aptitude
- Configuring APT
- Working with RPMs on Ubuntu
- Querying the RPM Database
- Work with Partitions, Filesystems, and Disk Quotas Lab Tasks
  - LPI Objectives Covered
  - Partition Considerations
  - Filesystem Planning
  - Partitioning Disks with fdisk
  - Partitioning Disks with parted
  - Filesystem Creation
  - Filesystem Support
  - Unix/Linux Filesystem Features
  - Swap
  - Selecting a Filesystem
  - Filesystem Maintenance
  - Mounting Filesystems
  - Mounting Filesystems
  - Managing an XFS Filesystem
  - NFS
  - SMB
  - Filesystem Table (/etc/fstab)
  - Configuring Disk Quotas
  - Setting Quotas

- Viewing and Monitoring Quotas
- Hot Adding Swap
- Accessing NFS Shares
- Setting User Quotas
- Linux Boot Process Lab Tasks
  - LPI Objectives Covered
  - Booting Linux on PCs
  - GRUB Configuration
  - GRUB ۲
  - Boot Parameters
  - /sbin/init
  - System Init Styles
  - Linux Runlevels
  - /etc/inittab
  - /etc/rc.d/rc.sysinit
  - SUSE /etc/init.d/boot
  - System Initialization
  - Runlevel Implementation
  - systemd System and Service Manager
  - systemd Targets
  - Using systemd
  - Shutdown and Reboot
  - Boot Process
  - GRUB Command Line
  - Basic GRUB Security
  - Basic GRUB Security

- Determine and Configure Hardware Settings Lab Tasks
  - LPI Objectives Covered
  - Managing Linux Device Files
  - Hardware Discovery Tools
  - Configuring New Hardware with hwinfo
  - PC Architecture and Bus
  - DMA & IRQ
  - USB Devices
  - USB Configuration
  - Configuring Kernel Components and Modules
  - Kernel Modules
  - Handling Module Dependencies
  - Configuring the Kernel via /proc/
  - Kernel Hardware Info /sys/
  - /sys/ Structure
  - Adjusting Kernel Options

مخاطبان دوره

- مهندسین شبکه
- برنامه نویسان
- مدیران شبکه
- مدیران سرور

پیش نیاز ها

- برای اخذ این مدرک هیچ پیش نیازی لازم نیست

دوره های مرتبط

دوره LPIC۲ لنوکس | Linux Engineer