



HOVAPHARM COURSES

Linux Essentials: Professional Curriculum & Graduate Registry

A Comprehensive Guide to Open-Source Administration and Automation

Course Overview & Learning Outcomes

About the Course

The HovaPharm Linux Essentials course is a rigorous 3-week program designed to take students from absolute beginners to proficient command-line users. The curriculum focuses on the Ubuntu ecosystem, emphasizing security, file system hierarchy, and task automation.

Core Competencies Gained

- **System Administration:** Installation, package management, and system updates.
 - **Command Line Mastery:** Navigating complex file structures and manipulating data.
 - **Security & Permissions:** Managing user access levels and file ownership.
 - **Data Processing:** Using Regular Expressions (Grep, Sed, Awk) to analyze logs and text.
 - **Automation:** Writing Bash scripts and scheduling tasks with Cron.
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Detailed Module Breakdown

Module 1: Introduction to Linux

- **Historical Context:** Evolution from Unix to Linus Torvalds' 1991 Kernel.
- **Distributions:** Comparative study of Ubuntu, Fedora, Debian, and Arch.
- **Environment Setup:** Virtualization via Oracle VirtualBox and Ubuntu installation.

Module 2: Command Line Basics

- **Navigation:** Deep dive into `pwd`, `ls`, and `cd`.
- **File Operations:** CRUD operations (Create, Read, Update, Delete) using `touch`, `mkdir`, `cp`, `mv`, and `rm`.
- **Text Editing:** Terminal-based editing using `Nano` and file inspection with `cat`, `less`, `head`, and `tail`.

Module 3: File System & Permissions

- **The Root Hierarchy:** Understanding the Linux directory structure (`/etc`, `/bin`, `/home`).
- **The Security Model:** Mastering the `rwX` (Read, Write, Execute) structure.
- **Access Control:** Modifying rights via Symbolic and Numeric methods with `chmod` and `chown`.

Module 4: Advanced Command Line Skills

- **Pattern Matching:** Using Wildcards (`*`, `?`, `[]`) and Regular Expressions.
- **The Power Pipeline:** Mastering `|` (Piping) and Redirection (`>`, `>>`) to chain commands.
- **Stream Editors:** Advanced text transformation using `sed` and data extraction with `awk`.
- **Process & Package Management:** Monitoring system health with `top/ps` and managing software via `apt`.

Module 5: Scripting & Automation

- **Bash Scripting:** Writing executable scripts, handling user input, and managing the `$PATH` variable.
 - **Scheduling:** Implementing `Cron` jobs for automated backups and system tasks.
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Official Graduate Registry

Verified Completion List

The following individuals have successfully viewed all instructional content, completed all practical lab exercises, and met the requirements for the **HovaPharm Linux Essentials** certification.

Graduate Name	Certificate ID	Verification Status
Aisha Mohamed Hussein	HVP-2026-LE10001	✓ VERIFIED
