Linux and Virtualization Tech 2023-2024 Catal

[ARCHIVED CATALOG]

SVAD 111 - Linux and Virtualization Tech

PREREQUISITES: INFM 109 - Informatics Fundamentals or ITSP 135 - Hardware / Software Support or (ITSP 132 - IT Support Essentials I & ITSP 134 - IT Support Essentials II)
PROGRAM: Cloud Technologies
CREDIT HOURS MIN: 3
LECTURE HOURS MIN: 2
LAB HOURS MIN: 2
DATE OF LAST REVISION: Fall 2022

Designed as a dual purpose course, providing students with the necessary skills to understand and apply Linux and virtualization concepts while maintaining a clear division between subjects. Students will apply fundamental concepts with project-based content exercises. Students will have a strong understanding of critical Linux and virtual technologies. Students will demonstrate the ability to install, manage, monitor, configure, and troubleshoot the fundamental systems and services available in most major Linux operating system distributions. Further study concentrates on the file system organization service, command line language, file system, and print service permissions found in the Linux operating system. Virtualization technologies include the exploration, installation, and troubleshooting of various virtualization software packages to obtain the skills necessary to choose and implement hypervisor environments for client-level operating systems.

MAJOR COURSE LEARNING OBJECTIVES: Upon successful completion of this course the student will be expected to:

1. Use the command line for help, listing directories & files, and archiving files.
2. Write basic shell scripts using Linux commands.
3. Demonstrate knowledge of major operating systems and Linux distributions.
4. Determining the basic requirements for a computer on a Local Area Network (LAN) and configure the network interface card (NIC).
5. Create user accounts and groups and configure user passwords and user and group permissions.
6. Demonstrate knowledge of devices and how they interact with the system.
7. Configure devices using O.S. tools and commands.
8. Describe how virtualization software works.
9. Identify categories of virtualization software.
10. Select a virtualization software product based on its features and system requirements.
11. Work with the administrative virtualization software consoles.
12. Use virtualization software to create and run virtual machines.
13. Install virtualization software.
14. Troubleshoot and repair systems using virtualization software.

COURSE CONTENT: Topical areas of study include -

- Command Line
- NIC Configuration
- LAN Settings
- Users
- Groups

- File management
- Shell scripts
- File systems
- File permissions
- File ownership
- Find system files
- Virtualization
- Troubleshooting

Course Addendum - Syllabus (Click to expand)
