澳 門 理 工 學 院
Instituto Politécnico de Macau
Macao Polytechnic Institute

COMP 225
Network and System Administration

Notes #0: Course Logistics

K. L. Eddie Law, PhD

Macao Polytechnic Institute
School of Applied Sciences
Academic Year 2020-2021, 2nd Semester

About the Course

- Network and system administrations are increasingly complex and essential fields in the information technology industry
- Aims at building up knowledge in the administration of network environment
- Roughly to cover
  - Linux environment installation, system administration, network services, Internet services, system maintenance, and system security, etc.

Learning Objectives

- Recognize different important Linux system commands and their usages
- Identify and recognize principles and importance of network administration in engineering practice
- Operate and manipulate under Linux environment using shell scripts from technical manuals or other information sources
- Configure and manage network components like DHCP, SSH and Firewalls
- Construct and setup a secure network for organizations
- Identify and recognize the principles of base network protocols
- Construct and configure different virtual environment of various Linux distributions

Typical Topics

- Overview of system administration and Linux system
- Linux installations
- Basic Linux environment (Bash)
- Administration and management tasks

- TCP/IP networking
- DHCP, telnet (insecure) and SSH
- FTP (insecure), sftp and scp
- Firewall
- Web server, etc.

Course Logistics

- Instructor: K. L. Eddie Law
- Office: M509
- Email: eddielaw@ipm.edu.mo
- Office hours:
  - Tuesdays, 5:30 – 7:00pm
  - Wednesdays, 2:30 – 7:00pm

- 2nd semester school term
  - Jan 21 (Thur) to May 12 (Wed)
- 14-week lecture schedule
  - Class A: Tue 2:30 – 5:30 pm, N54
  - Class B: Tues 2:30 – 5:30 pm, N54

Assessment

- The course is graded on a 100 point scale, with 100 being the highest possible score and 50 the passing grade

| Item	Description	Percentage
9 to 11 In-class Labs	for practice	0%
2 to 3 homework assignments		25%
1 mid-term test	in week #8 or #9	25%
1 final examination		50%

Textbook and References

- Textbook
    - Mackin, D. (2017). *UNIX and Linux System Administration Handbook, 5th edition*. Pearson Education.
- References
    - Both, D. (2020). *Using and Administering Linux: Volume 1 – Zero to SysAdmin: Getting Started*. Apress.
    - Both, D. (2020). *Using and Administering Linux: Volume 2 – Zero to SysAdmin: Advanced Topics*. Apress.
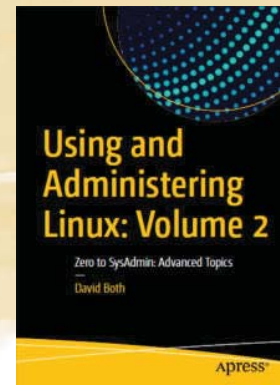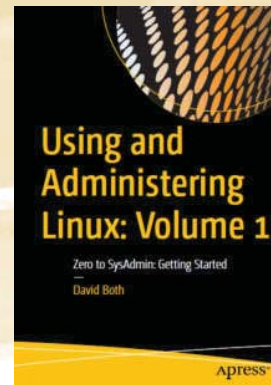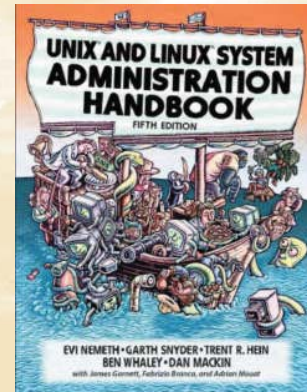
Other References

- P. Kirkbride, *Basic Linux Terminal Tips and Tricks*, Apress Publisher, 2020.

- J. LaCroix, *Mastering Ubuntu Server*, Third Edition, Packt Publishing, 2020

- S. M. Sarwar, R. M Koretsky, *Linux: The Textbook*, Second Ed., CRC Press, 2019

- B. M. Harwani, *Unix and Shell Programming*, Oxford University Press, 2013.