LONDON CAPITAL COMPUTER COLLEGE

Diploma in Unix (189) – Linux Administration

Prerequisites: Knowledge in Unix operating system.	**Corequisites:** A pass or higher in Certificate in Unix Networking or equivalence.
Aim: The course will start by exploring the booting and setting up stand-alone system. Candidates will learn how to set up and manage user accounts, how to manage other resources such as disk space, CPU usage and user access to shared resources with maximisation of security in mind. Since virtually all systems are networked today, candidates will learn about e-mail (POP and SMTP protocols), Web servers and networking services. The course also presents the following Internet services: DNS, FTP, telnet, HTTP (Apache Web Server), SSH. The intranet topics will be discussed including Network File System (NFS), Network Information Services (NIS) and interoperability with Windows system via Samba. Candidates will also explore topics in networking: network configuration, security and interoperability. This course offers hands-on experience in UNIX system administration skills using the LINUX operating system. Candidates learn system software installation, user-account administration, installation and configuration of the X Window System, backup and restore, mounting file systems, serial communication and modem connections, printers and spooling, automation of administrative tasks, configuring and building kernels, and an introduction to TCP/IP networking.	
Required Materials: Recommended Learning Resources.	**Supplementary Materials:** Lecture notes and tutor extra reading recommendations.
Special Requirements: The course requires a combination of lectures, demonstrations, discussions, and hands-on labs.	

Major Learning Outcomes:	**Assessment Criteria:**
1 Define the procedures required to install and configure Linux.	1.1 Describe the advantages of partitioning the hard drive 1.2 Describe the importance of swap space 1.3 Outline how to set a system to multi-boot 1.4 Demonstrate the installation process 1.5 Describe hardware requirements (diskspace, memory etc)
2 Describe how to configure the X Window system	2.1 Define the X Window system 2.2 Describe installation and configuration of GNOME 2.3 Describe installation and configuration of KDE
3 Analyse general system administrative issues. Identify the process of creating and maintaining user accounts. Describe the Linux system startup process.	3.1 Define the root account 3.2 Describe the process of creating user accounts 3.3 Be able to create a user account 3.4 Analyse the user's login process 3.5 Be able to search files as a regular user 3.6 Analyse the system's security access 3.7 Describe how to change user passwords 3.8 Describe how to disable or remove user accounts 3.9 Describe how to modify a user's information using *chfn* 3.10 Describe the system configuration files 3.11 Evaluate the cron process 3.12 Explore the *rc* configuration files 3.13 Analyse the Linux startup process 3.14 Analyse the system shutdown and restart

	process
4 Describe how to customise Linux configuration and simplify administrative issues. Understand the bourne, korn and c shell commands.	4.1 Explore the .profile in bourne shell 4.2 Analyse the user and system environment 4.3 Explore the .profile in korn shell 4.4 Analyse the /etc/profile file 4.5 Explore the c shell commands 4.6 Analyse the .login file 4.7 Analyse the cshrc file 4.8 Describe the cshell and root 4.9 Describe how to configure and administer DNS 4.10 Describe internet user authentication 4.11 Describe how to configure shares and how to access them 4.12 Describe Network File System (NFS) services
5 Define why performing regular backups is one of the system administrator's top priorities.	5.1 Identify server backup procedures 5.2 Describe server restore procedures
6 Provide an overview on automating repetitive/tedious administrative tasks using crontab and script files.	6.1 Define how to check system storage space 6.2 Describe how to start and stop processes 6.3 Analyse automating repetitive tasks and procedures

Recommended Learning Resources: Linux Administration

Text Books	• Linux Administration Handbook by Evi Nemeth, Garth Snyder & Trent R. Hein. ISBN-10: 0131480049 • Linux System Administration by Tom Adelstein & Bill Lubanovic. ISBN-10: 0596009526 • Linux System Administration by Vicki Stanfield & Roderick W. Smith. ISBN-10: 0782141382
Study Manuals 	BCE produced study packs
CD ROM 	Power-point slides
Software 	Linux