






Certificate in Unix (188) – Introduction to Linux

Prerequisites: Knowledge in Windows operating system.	Corequisites: A pass or higher in Certificate in Networking or equivalence.
Aim: The program combines theory and practical applications to enable candidates learn skills that are immediately applicable in the workplace. The course addresses management of the Linux file system and utilities; file editing; file permissions; pipes, redirection, and filters; text handling utilities; mail facility; bash shell, variables, and basic scripts; process management; and shell programming basics. Manipulating and maintaining files within the UNIX file system; creating and editing text files using the vi and ed editors; using pipes, redirection, and filters; using advanced text processing utilities; using electronic mail; writing and debugging shell scripts; submitting and executing processes.	
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.	
<p>Major Learning Outcomes:</p> <p>1 What is Linux, how did it come into existence, advantages and disadvantages, what does the future hold for Linux and who should use it.</p> <p>2 Describe how to connect to the Linux system.</p> <p>3 Discuss the files and directories on a Linux system. Analyse how the use of predefined paths allow users to find, read and manipulate files. Define the Linux command structure.</p>	<p>Assessment Criteria:</p> <p>1.1 Define Linux</p> <p>1.2 Describe the advantages and disadvantages of Linux</p> <p>1.3 Outline the Linux flavours</p> <p>1.4 Discuss the different Linux distributions.</p> <p>2.1 Describe the logging in and logging out process</p> <p>2.2 Define basic Linux commands</p> <p>2.3 Identify how to get help in Linux</p> <p>2.4 Be able to change password</p> <p>3.1 Analyse the structure of the Linux commands</p> <p>3.2 Analyse the rules of file names</p> <p>3.3 Describe the directory hierarchy</p> <p>3.4 Evaluate file and directory permissions</p> <p>3.5 Be able to display contents of a directory</p> <p>3.6 Demonstrate using wildcards</p> <p>3.7 Be able to create and remove a directory</p> <p>3.8 Be able to copy and link files and directories</p> <p>3.9 Be able to interrupt a runaway program</p> <p>3.10 Describe the overview of the Linux file system</p> <p>3.11 Identify why file partitioning is important</p> <p>3.12 Describe Linux layout and types</p> <p>3.13 Define mount point</p> <p>3.14 Describe the Linux path</p> <p>3.15 Describe absolute and relative paths</p> <p>3.16 Describe Linux important files and directories</p> <p>3.17 Define Linux configuration files</p> <p>3.18 Describe how Linux handles devices</p> <p>3.19 Describe Linux variable files</p> <p>3.20 Be able to search files by content and</p>

	attribute
	3.21 Describe how files are manipulated in Linux
	3.22 Describe Linux files security system
4 Describe how to manage processes, boot and shutdown procedures, postponing tasks and repetitive tasks.	4.1 Differentiate multi-user and multi-tasking
	4.2 Analyse the different Linux processes
	4.3 Describe process characteristics/attributes
	4.4 Describe Linux boot, initialization and shutdown process
	4.5 Describe the initialization run levels
	4.6 Describe how processes are managed
5 Describe the standard input, output and error and how are these features used from the command line.	5.1
	5.2 Describe input/output in Unix
	5.3 Analyse the redirection operators
	5.4 Describe filters in Unix
6 Outline the importance of working with an editor, discussion of the most common editors.	6.1 Describe a text editor
	6.2 Identify the basic <i>vi</i> editor operations
	6.3 Explore how to start and quite <i>vi</i>
	6.4 Be able to insert, delete and search/replace text
	6.5 Be able to move cursor
	6.6 Review the Linux Office
7 Understand how to configuring your graphical, text and audio environment, settings for the non-native English speaking Linux user, tips for adding extra software.	7.1 Describe how to create a home directory
	7.2 Describe shell setup files
	7.3 Define shell scripts
	7.4 Analyse the Linux graphical environment
8 Be able to convert files to a printable format, getting them out of the printer and troubleshoot print problems.	8.1 Describe the Linux print service
	8.2 Describe print formatting tools
	8.3 Identify how to troubleshoot print problems
9 Be able to prepare data for backup. Discuss various backup tools and how to conduct a remote backup.	9.1 Describe the process of archiving data
	9.2 Describe the process of backing up data
	9.3 Define remote data backup
10 Provide an overview of Linux networking tools and user applications, with a short discussion of the underlying service daemon programs and secure networking.	10.1 Describe networking protocols supported in Linux
	10.2 Identify network configuration files
	10.3 Outline internet/intranet applications
	10.4 Describe security services in Linux

Recommended Learning Resources: Introduction to Linux

Text Books	<ul style="list-style-type: none">• Introduction to Linux by Machtelt Garrels. ISBN-10: 1596821124• Introduction to Unix and Linux by John Muster. ISBN-10: 0072226951• Introduction to Unix/Linux with DVD by Christopher Diaz. ISBN-10: 8131502465
Study Manuals 	BCE produced study packs
CD ROM 	Power-point slides
Software 	Linux

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