*NETW240* Final Exam Study Guide

**YOU MAY WANT TO PRINT THIS GUIDE.**

**1.** **The Final Exam is open book, open notes.** The maximum time you can spend in the exam is 3 hours, 30 minutes. If you have not clicked the Submit For Grading button by then, you will be exited from the exam automatically. In the Final Exam environment, the Windows clipboard is disabled, so you will not be able to copy exam questions or answers to or from other applications.

2. You should click the Save Answers button in the exam frequently.  
This helps prevent connection timeouts that might occur with certain Internet service providers and also minimizes lost answers in the event of connection problems. If your Internet connection does break, when you reconnect, you will normally be able to get back into your Final Exam without any trouble. Remember, though, that the exam timer continues to run while students are disconnected, so students should try to log in again as quickly as possible. The Help Desk cannot grant any student additional time on the exam.

**3.** **See Syllabus "Due Dates for Assignments & Exams" for due date information.**

**4. Reminders**

* You will only be able to enter your online Final Exam one time.
* Click the Save Answers button often.
* If you lose your Internet connection during your Final Exam, log on again and try to access your Final Exam. If you are unable to enter the Final Exam, first contact the Help Desk and then your instructor.
* You will always be able to see the time remaining in the Final Exam at the top right of the page.

**5. Assessments with Multiple Pages**

* Make sure to click the Save Answers button before advancing to the next page (we also suggest clicking on Save Answers often while you are working).
* Complete all of the pages before submitting your Final Exam for instructor review.
* Do NOT use your browser's Back and Forward buttons during the Final Exam.
* Please use the provided links for navigation.

**6. Submitting Your Final Exam**

* When you are finished with the Final Exam, click on the Submit For Grading button.
* **Please note: Once you click the Submit For Grading button, you will NOT be able to edit or change any of your answers.**

**7. Exam Questions**

* There are 23 randomly selected multiple choice questions each worth 6 points, for a total of 138 points.
* There are seven randomly selected short answer questions each worth 16 points, for a total of 112 points.
* The Final Exam covers all course TCOs and Weeks 1–7.
* The Final Exam consists of three pages, which can be completed in any order. You may go back and forth between the pages.
* The Final Exam questions are pooled. This means that not everyone will have the same questions. Even if you do have some of the same questions, they may not be in the same order. These questions are distributed among the TCOs. The entire exam is worth 250 points.
* On the essay questions, your answers should be succinct, should fully address each part of the question, and should demonstrate your knowledge and understanding in a concise but complete manner. Most essay questions require answers that are a couple of paragraphs (not a couple of sentences) that directly speak to each part of the question. Some students opt to work on the essay questions first, due to their higher point value and the length of time needed to adequately address each question, but this is entirely your choice.
* **Remember to always use proper citation when quoting other sources.**This means that ANY borrowed material (even a short phrase) should be placed in quotation marks with the source (URL, author/date/page number) immediately following the end of the passage (the end quote). Changing a few words in a passage does NOT constitute putting it in your own words, and proper citation is still required. Borrowed material should NOT dominate a student’s work, but should only be used sparingly to support your own thoughts, ideas, and examples. Heavy usage of borrowed material (even if properly cited) can jeopardize the points for that question. Uncited material can jeopardize a passing grade on the exam. As a part of our commitment to academic integrity, your work may be submitted to turnitin.com, an online plagiarism checking service. So please be VERY mindful of proper citation.

**8. Some of the key study areas are listed below. While these are key areas, remember that the exam is comprehensive of all of the assigned course content, and this study guide may not be all inclusive.**

* TCO 1
  + Linux history
  + Operating system characteristics
  + Licensing requirements
  + GNU—general public license
* TCO 2
  + Different Linux installations
  + Custom installation
  + System requirements
* TCO 3
  + First two levels of Linux directory structure
  + Commands for file system usage and management
  + System variables
  + Creation and modification of files using vi and cat
  + File and directory backup
* TCO 4
  + Switch user from casual to root account
  + /etc/passwd and /etc/shadow
  + Adding new user accounts
  + Permissions
  + File and directory ownership
  + Group management
  + Creating shell scripts
  + Using variables in a script
* TCO 5
  + IP addressing and configuration
  + Domain name services (DNS) server
  + Network configuration
  + Routing table
  + Advantages of ssh and scp
* TCO 6
  + FTP
  + DNS
  + Databases
  + Use of system-config-printer to manage CUPS
  + Printer and document management commands
  + Differences among various local and networked printing options
* TCO 7
  + Advantages for using xinetd
  + Nfs, Samba, vsFTP
  + /var directory as a log depository
* TCO 8
  + KDE
  + GNOME
  + Desktop Tools

**9. Areas that were discussed in the discussion topics will be prime targets.**

**10. Assignments will also be prime targets for revisiting.**

**11. Reviewing the TCOs,** which are listed below for your convenience, will also be a great preparation for the Final Exam.

|  |  |
| --- | --- |
| 1 | Given a business-case scenario of a company requesting vendor bids for an operating system migration, write a proposal recommending Linux as an operating system of choice. Considerations for both user terminal and server operations should be included in the proposal. |
| 2 | Perform the installation of the Linux operating system in a network environment. Pre-plan the hardware requirements and software options for the installation. Requirements for both terminal and server installations should be addressed on separate planning documents. |
| 3 | Given access to a Linux-based operating system, examine the hierarchical file system. Identify and list the major sub-directories that make up the core of the operating system. Using the command line interface, demonstrate your ability to manipulate files and directories, and control processes. Also, demonstrate your understanding of the fundamental operating system services including init, getty, syslog, atd and crond. |
| 4 | Given a scenario in which newly hired company employees require user and group accounts on a server, demonstrate the methods required to create new accounts, modify existing accounts, and provide ownership and permissions for files, directories, services, and package management. Also, demonstrate the ability to create and run a simple Bash script that runs a sequence of CLI commands. |
| 5 | Given a local area network, demonstrate the configuration steps needed to configure Linux servers and workstations for TCP/IP networking including configuration of Interface cards, hostnames, hostname to IP address resolution, and static routing. Demonstrate successful configurations by verifying ping connectivity using IP addresses and hostnames. |
| 6 | Demonstrate the ability to deploy a server in the Linux environment that allows secure remote logins to other servers, hosts, and network equipment. Additionally, allow secure uploading and downloading of files using encryption of data and passwords. |
| 7 | Given a small network of Linux servers and workstations, deploy a DHCP server to provide TCP/IP configuration settings to the Linux workstations. Also, demonstrate a fundamental understanding of the ability of Linux servers to interoperate with Windows clients to share files and printers. |
| 8 | Given a common Linux graphical user interface (GUI), demonstrate the ability to manage users, files and folders and a terminal window. Additionally, demonstrate the advantages of the GUI environment in capturing and analyzing TCP/IP packets. |

Finally, if you have any questions for me, please post them to our Q & A, or e-mail me. Good luck on the exam!