

Week #2 – DNS and Proxy

Overview of the week's objectives

This week will have us review elementary DNS and Proxy principles via two modules; O4L1 and O5L6. You will find detailed information about the various graded and non-graded learning activities you are expected to engage in below.

It is important to understand that graded activities, e.g. quizzes & exams, are meant to evaluate how ready you are to graduate from this offering while the non-graded activities are meant to help you prepare for the former. **Non-graded learning activities are not optional. They are meant to develop your skills.**

It is recommended you keep track of the time spent on each of these learning activities using the following table. This will help you assess how time-consuming this offering is and therefore whether you are able to stay registered given your other responsibilities. It will help you realize whether you are devoting enough time to some learning activities that you might otherwise think you are performing up to expectations.

TODO List

Learning Activity			Time in hours		Points
			Expected	Spent	
Reading Assignments	O4L1 O5L6	Studying Guides & Videos	2		
Practice Assignments	O4L1-PQ O5L6-PQ	Taking Practice Quizzes	2		
	W2-PA	Working on PAs & Participating to PA forums	7		
Graded Assignments	W2-GQ	Taking Graded Quiz	1		2
		Participating to Discussion forums			1
			12		3

Task #1 – Reading Assignments

You will find one “[online module guide](#)” document in this week’s folder per module.

These slide shows will provide you with an overview of the material we are studying this week, along with links to video lectures or demonstrations, links to other study resources available from the web.

Task #2 – Practice Assignments

Weekly practice assignments will help you apply what you have learned “hands-on” using your virtual Linux box. Each Practice Assignment (PA) has its own forum in which you will post and discuss solutions. If you need help, post in the “[help forum](#)”.

- When you are done with an assignment, post evidence of your success such as screenshots or a brief video along with an explanation of what you did to ensure your solution was working.
- Take a look at other students’ posts to see if their solutions are different from yours. This will not happen often with trivial PAs, but it will be helpful in more involved ones. It is important to discuss other students’ solution by responding to their posts.
- Take a look at other students’ posts and learn / provide feedback on their way of assessing the correctness of their solutions.

This is a great way for all students to develop an understanding of the need for system administrators to not only “perform tasks” but be able to do quality assurance on their own work. Just as in programming, sloppy implementations lead to bugs which may take months to sort out. Just as in programming, testing is essential.

Solutions will not be provided. If you are having difficulties, post in the “[Support forum](#)”; this will help you articulate your question. Most of the time, this is a huge step toward solving your own problem. Post early while you keep working on your assignment. If you find the solution, just follow up on your original post to let everyone know. If you wait until you have exhausted all your available time to ask for help, you will probably not get any help, or you will be unable to follow up if needing more explanations are needed.

PA #1 : Assignment – Archive Config Files (C4L1A1)

Archive all your configuration files from /etc/named and /etc/named.conf and turn into the drop box for this activity.

Submit a tar.bz2 archive and follow the standard naming convention of: `firstname_lastname_course4_lesson1_lab1.tar.bz2` to receive credit.

PA #2 : Assignment – Local DNS Entry (C4L1A2)

For your local machine only, create a DNS entry for Google.com and demonstrate using screen captures, DIG, and NSLOOKUP that all requests for google.com come back to your local machine at 127.0.0.1. Archive all of your configuration files from /etc/named and /etc/named.conf, as well as your screen prints and turn into the lab 2 drop box.

Submit a tar.bz2 archive and follow the standard naming convention of: `firstname_lastname_course4_lesson1_lab1.tar.bz2` to receive credit.

PA #3 : Assignment – Definitions for Testfake.conf File (C4L1A3)

Using the DNS zone file for testfake.conf and any appropriate Internet resources, create a definition for each line in the file.

Submit the completed assignment per your instructor's direction to the drop box for this assignment.

Task #3 – Use the “Support forum”

Make sure you post any questions you might have about the above non-graded learning activity on the “[help forum](#)”. In order to maximize the help you will get from this forum, you must follow these guidelines;

- Be polite to and respectful of anyone reading your posts. If you respond to another student, always provide constructive feedback.
- Post early in the week, no one will be there to respond at 9PM Friday. See also the instructor’s post about his schedule.
- When you bump into a question, post it immediately, take a break from your problem, go back to it after checking if you received a response.
- If you find the solution, post an update. If not, follow up with what you have tried beyond your initial post. When the instructor or another students looks at your post, they should know what you’ve done to solve your problem
- The previous advice entails that posting “I am not able to do exercise XYZ” is really not showing you put in enough efforts of your own. It is not providing anything for the instructor to help you with either. If you are in a rare situation where you don’t know where to start, you should read again the assignment and ask questions about what you do not understand in it. This would be the bare minimal to get started.

It is also recommended you also keep a look on this forum as the week progresses and attempt to respond to others’ questions. It will help you measure how well you understood the material;

- If you know the answer, responding will help you articulate your thoughts
- It will also help you make sure your answer is correct since the instructor will review your post when reviewing the original question and add feedback if useful
- If you don’t know the answer, you missed something in the material. Time to study some more and post what you think the answer is. Many students overlook things they don’t understand when working on the weekly material. This is a good way to catch such misses.

PA #4 : Forum – Effects of a Rogue DNS & DHCP Server (C4L1F1)

Describe how someone coming into a company with a personal laptop running DNS and a DHCP server could disrupt the entire network communication structure as well as steal company documents and protected information? How would you locate the problem? Once you have answered the question above, respond constructively to two comments or questions from your classmates.

PA #5 : Forum – Corruption of TLD Databases (C4L1F2)

What would happen if the TLD databases became corrupted for less than 24 hours? Would we still be able to communicate on the Internet? Why or why not? Support your answers using white-papers and RFC's available on the Internet. You should also respond to comments or questions from other students. Your responses should be substantial and helpful.

Task #4 – Graded quizzes

When you are done learning about this week's material, applying your knowledge through the various learning activities to make sure you are ready, getting feedback from the instructor / students on your participation, you may take the graded quiz.

Not including the First Week Quiz, there are 11 Weekly Graded Quizzes, 2 points each, totaling 22 points.

The time you have to take the quiz is limited;

- If the quiz says you have 1 hour, it will be one hour from the moment you click the quiz's link for the first time.
- For instance, you start a one hour quiz at 8PM. Blackboard shows you have a one hour timer. You get disconnected at 8:30PM and reconnect at 8:45PM. Blackboard might show erroneously another fresh one hour timer but you still have only until 9PM to finish your quiz.

You have only one attempt to take the quiz;

- Blackboard shows "multiple attempts" being allowed. This is only to help students who get disconnected. See above example.

You need to save your responses;

- If you get disconnected and reconnect to resume the quiz, your previous questions will be already stored in your first attempt only if you used the "save" button as you entered each of them.
- Even questions already saved do not show up when you reopen the quiz so you will need to know where you were when you got disconnected if you plan on answering the rest in your 2nd attempt.

As a student registered in an online offering, you are expected to have a reliable and fast internet connection. If you get disconnected, email your instructor as soon as you are done with the quiz and provide a detailed explanation of the problem. Students who are experiencing technical difficulties will not receive any deadline extension, or other privileges compared to other students.

The graded quiz will be graded manually after we are done with the week devoted to the module. Grades will be posted in the blackboard gradebook along with feedback, if necessary.