

WEEK 4 – TASK 4.3D

Distinction Task.

Release Date: 12 April, Due Date: 17 May, End Date: 21 May.

Learning Outcomes

In this task, students have an opportunity to pursue any topic of their choosing. This task aims to encourage ambition, risk-taking, independence, and innovation - all highly valued traits for the success of cyber security experts.

Instructions



An **answer sheet template** is available on OnTrack as a '**Resources**'. Please download the answer sheet and fill it with your answers. This task must be uploaded both to OnTrack and the unit site. See the last page of this document for more information.



We are fighting the good fight. We are on the good side of the cyber world, and we are in this together. We learn together and from each other.

Help is always available in SIT182. Please go to **Discussions** and ask your questions about this task in **Task 4.3D**. All students are encouraged to participate and help peers with their questions. Helping others is a great way to learn and think about aspects you may have overlooked. You can also seek help from tutors during online and face-to-face pracs. However, please note that pracs are primarily aimed at Pass-level tasks, and tutors will only aim to provide you with suggestions about the more advanced tasks.

Note: Distinction and HD tasks are more challenging and are less guided. The only source of support for these tasks is Discussions on the unit site. Students who achieve Distinction and HD in this unit are top performers in Bachelor of Cyber. You will need to show dedication, professionalism, and ambition to complete these challenging tasks.



References: In cyber security, one of the most common referencing styles is **IEEE** – however, you are allowed to use any referencing style in this unit. Please refer to unit site > Content > Referencing - Hints & Tips for more information.

‘Something Awesome’ task: It’s highly uncommon for you not to be asked this simple but critical question in your future job interviews: “tell us about a time when you showed independence and worked on an exciting challenge of your own”. Then they will probably ask: “why this was challenging for you, and how did you manage to conquer it”.

Well, here is an opportunity to prepare an answer to this question. We call this task ‘something awesome’, and we encourage you to explore anything that excites you. You don’t need to rush through this task and have a few weeks for it – instead of the usual 2 weeks. Nonetheless, please ensure that you start working on the task early as you will need to claim having completed ‘something awesome’! (i.e., if you start 2 nights before the deadline, you will not be able to complete this task.)

There are no boundaries for this task – as long as you do not violate the code of ethics that you agreed to in Task 1.2P, and you do not violate academic integrity as per Task 1.3P.

The Key Requirement: There is one key requirement for the ‘something awesome’ task: you should be able to provide a convincing argument that working on this task, you learned something new, and for this, you went above and beyond whilst showing independence, professionalism, and ambition. Your tutor will review your argument and decide whether this was true. If s/he is happy, you will complete the task. If your tutor was not happy, but you thought that you deserve ‘complete’, you can raise this for unit chair review – who will make a conclusive decision.

An important clarification: you don’t need to change the world or make a scientific discovery in this task. Just pick something reasonable that you wished there was time to explore as a task in this unit. Managing your goals and aligning them with reality (i.e., your resources) is what a Distinction-level student must be capable of. You really want to show that you can ‘lead’ and go beyond instructions given to you.

What kind/type of project? We generally encourage a hands-on task. Here are some examples:

- If you are aiming for HD and completed Task 3.4HD, you would recall that we skipped making the executable undetectable and setting up persistent access to the victim. You could use this task to achieve those.
- In Task 3.3D, you managed to set up backdoor access to Metasploitable. How about installing a keylogger and extracting the keystrokes of the user?
- You can perform static/dynamic analysis on another malware of your own choosing in Win 7 VM (similar to Task 2.1P and be careful!).

- How about implementing a simple client/server program that communicates between a VM and your host OS and then executing a Denial of Service against the simplistic server by flooding network traffic from your Kali VM?
- How about using VLC Media Player to stream audio from one VM to your host and then break down the communication using your Kali VM? You can explore all sorts of attacks, but an easy one could be sniffing TCP packets and then sending TCP reset packets to the server.

Generally, you can think of ways that you could extend tasks you have seen in this unit and get inspired to come up with your own. **Note that for hands-on tasks, you are expected to provide a screencast/recording similar to Task 3.3D and Task 3.4HD.**

If you enjoy research-side, math-side, or interdisciplinary challenges in cyber security, you can also opt for such projects – i.e., it doesn't have to be a hands-on exercise. For such projects, you will need to ensure that they lead to a report of about 1000 words (+/- 100 words is OK) and the report must be well-written, and you should avoid abstract generic type reports. Your report should include a cyber security challenge/problem and discuss solutions to that problem. Generally, remember that you are writing 'something awesome' and the quality of your work should be of that level. There will not be a report structure for you to follow – it's all up to you.

I'm not sure if my idea is 'awesome': you can send an email to Arash, who is your unit chair (a.shaghaghi@deakin.edu.au) and seek feedback. Please use 'consultation about Task 4.3D' in your email subject and allow up to 3 business days for Arash to get back to you – i.e., reminding again about the importance of starting early.



What to include in your submission? It can be structured in any way you like or you think is best. However, the following must be included:

- An overview of the task – giving enough details, so the scope is clear for the tutor.
- Discuss why this task is awesome and how you showed independence, professionalism, and ambition to complete it.
- A brief reflection about what you learned and how you found the task (like other tasks).

If you opt for a report, the above are in addition to your report and don't count towards the word limit.



How to submit? For this task, you will need to upload your answer sheet PDF to the unit site **AND** OnTrack. For OnTrack, it's just like any other task. On the unit site, however, head to Assessment > Assignments and then click on Task 4.3D. To upload your answer sheet, click on "Add a File". Once the answer sheet is uploaded, click on Submit.