

HIT172 Operating Systems and Applications

Lab Assessment 02

Value: 20%

Submission Deadline: *27th April, 2024; 23:59 (Darwin Time)*

Submission Format

In the Cover Page, along with your Full Name and ID, you must also mention your Campus (Sydney** or **Darwin** as per your enrolment)**

You should take the screenshots of your computer display while solving the exercises and paste the image in the doc\docx file. You should also write briefly at the end of each screenshot explaining its purpose and finally summarize your understanding of the whole task (what you have done and how) at the end of each task.

Submit the document in PDF format, in case you can't find anyway to convert it to PDF, then submit in doc\docx format. Remember submitting in PDF, keeps the formatting\fonts etc. of your document in place and the overall presentation remains nice and intact.

Online research are allowed for all the tasks.

TASK-01: Remote Desktop Connection

Setting up Remote Desktop Connection:

(Marks 06)

You are working as *HelpDesk Support* for an organization where your usual duty involves providing remote users various IT related supports. Majority of these users are placed in locations where high-speed LAN (10Mbps) are *not* available. Assume they are using the Darwin VM at their end, and you have Canberra VM at your end. Now you will have to set up Remote Desktop Connection from Canberra to Darwin; so that you, with the physical access to Canberra VM, can remotely connect to Darwin VM. You also have to ensure the connection is optimized for *low-speed broadband* networks.

Follow the submission format and before starting this task ensure VMs can ping each other.

TASK-02: Windows Firewall with Advanced Security

Creating Firewall Rules:

(Marks 06)

www.cdu.edu.au or cdu.edu.au has the IP address of 138.80.162.69. Create an outbound firewall rule in *any of the VMs* that will allow the VM's browser to access all other websites except that of CDU's one.

Name the rule according to your own CDU student ID, for instance *s298900*. But don't use '298900', use your **own** ID.

Before you initiate the task, change the VM's Network from 'intnet' to 'NAT', this will allow access to internet through your host (physical) machine. So also ensure your physical machine is connected to internet.

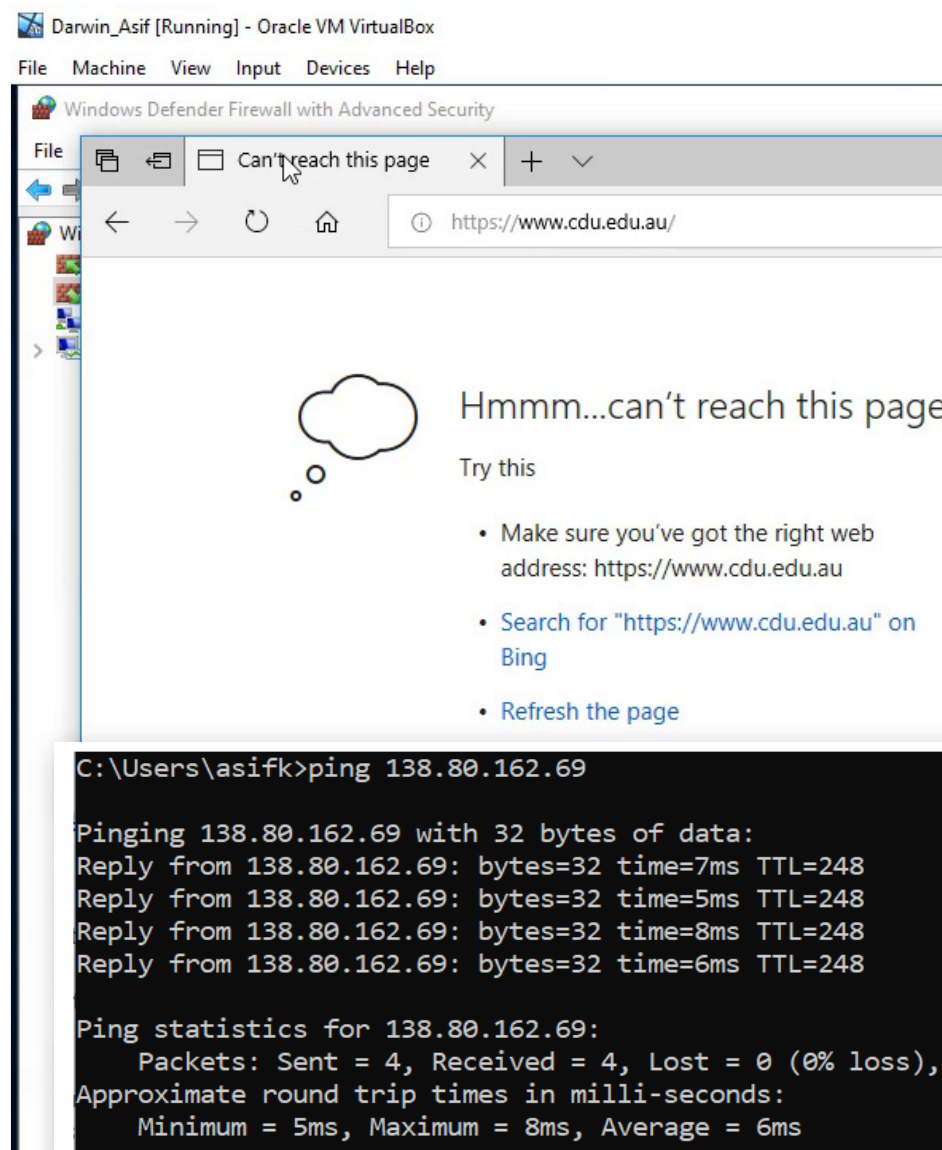
You must provide all the necessary screenshots up until the creation of the rule as well as results following the submission format. While providing the result, include browser's screenshot where it shows it can access other websites but not CDU; plus in the same screenshot, include ping screenshot where it shows – within one command box – a ping request to 8.8.8.8

succeeds whereas another request to 138.80.162.69 fails (the format for screenshot is given next page).

8.8.8.8 is a public DNS server used and maintained by Google so it is always up and running.

Now once you are done with the above and taken necessary screenshots for the whole process and result; make required changes to the rule so that this time, Ping requests to CDU goes through but the website still remains unavailable. (**hint**: ping uses ICMP while Web Traffic uses TCP).

I've attached the following screenshot for reference, as you can see, the browser and command box must be present within a single screenshot.



TASK-03: Linux Commands

Linux:

(Marks 08)

Following are some tasks which should be executed in a terminal and the corresponding screenshot should be included.

- Find out the ID of a specific process and cease its execution using that ID.
- Create two folders called Test1 and Test2 in your Home directory. Create another two files, F1.txt and F2.txt inside Test1; now show how to move these two files to Test2. Provide screenshots for both the *Move* and *Create* commands.
- Using Method-1* for **chmod**, set permission for a file in the format **rw-rw-r-x**.
- Using Method-2* for **chmod**, 'Give Execute and Write' permission to group and owner for a file.

* Refer to the *chmod* section of Linux command file for Method 1 and 2.

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