

Read the description and requirements below carefully. If you have any questions, please see your lecturer(s) for further clarification.

Theme and the Deliverables

The learning outcome for this individual assignment requires you to explore the topics of Computer Networks and Internet. Advancement in networking technology has certainly changed the way we live and has impacted and changed the way businesses are being conducted and managed.

You are required to design a functional network on the design level for an organization on the requirements below:

Background information of the Organization:

The organization is a university which is located in United Kingdom, the main campus in London, with branch campuses in Edinburgh, Scotland and Belfast, Northern Ireland in Europe and Kuala Lumpur, Malaysia.

The Kuala Lumpur campus holds **important and confidential** research data from two research centers in both Yangon, Myanmar and Vientiane, Laos.

Functional Requirements of the Organization:

1. The Main Campus should have access to all the branch campuses.
2. The Main Campus should not have direct access to the two research centers.
3. The Main Campus should only have access to the research centers via the Kuala Lumpur Campus.
4. The Branch Campuses should only have access to the Main Campus.

Deliverables:

1. A network diagram which will fulfil all the functional requirements mentioned above accordingly.
Your network diagram should clearly show the usage of Switches, Routers, Firewalls, as well as Servers and Computers based on the background information of the organization given above.
You are allowed to use any network simulator to create the network diagram, such as Huawei's eNSP.
2. For every part of the network, you should include explanation on how the setup works, as well as how that particular part of the network meets the **Functional Requirements** mentioned above.

Marks will be allocated based on the following aspects and marking rubric:

Component	Aspect	Marks	Marking Rubric*		
			Exceeds Expectation 15 - 11	Meets Expectation 10 - 6	Below Expectation 5 - 0
The Main Campus should have access to all the branch campuses.	Degree of adherence to this particular functional requirement as reflected in the Network Diagram and the explanation that comes with the network diagram.	15			
The Main Campus should not have direct access to the two research centers.	Degree of adherence to this particular functional requirement as reflected in the Network Diagram and the explanation that comes with the network diagram.	15			
The Main Campus should only have access to the research centers via the Kuala Lumpur Campus.	Degree of adherence to this particular functional requirement as reflected in the Network Diagram and the explanation that comes with the network diagram.	15			
The Branch Campuses should only have access to the Main Campus.	Degree of adherence to this particular functional requirement as reflected in the Network Diagram and the explanation that comes with the network diagram.	15			
			Exceeds Expectation 20 - 16	Meets Expectation 15 - 9	Below Expectation 8 - 0
Feasibility of the proposed Network Design	Technically viable?	20			
			Exceeds Expectation 10 - 8	Meets Expectation 7 - 4	Below Expectation 3 - 0
Suitability of the proposed Network Design for the given scenario	Is the proposed Network Design suitable for the given scenario?	10			
	Overall suitability of the Proposed Network Design	10			
Total marks = 100 (will scale down to 10%)					
Comments if any:					

***Marking rubrics are as below:**

Exceeds Expectation - Have achieved beyond the expected academic standards.

Meets Expectation - Reached basic academic standards.

Below Expectation - Not up to the desired academic standard.