Assignment 2

Lecturer:	John O'Raw
Report Title:	Assignment 2
Submit to:	Blackboard with all files as specified in the assignment, submitted as a single ZIP folder.
Date Submitted:	14 Dec 2020

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Programme of Study:	M.Sc. In Cloud Technology
Module:	Enterprise and Data Centre Networking

Please refer to the Institute's Quality Assurance Handbook, Version 3.0, September 2018

1. Practical work, forming part of the CA of a module, will only be assessed if the student has attended the relevant practical classes.
2. CA work must be completed within the schedules and specifications (specified in the CA brief). Students who submit CA late may forfeit some or all the marks for that work.
    a. The total marks available for an assessment be reduced by 15% for work up to one week late; i.e. a grade of 50% would become (50*0.85) = 42.5%
    b. The total marks available be reduced by 30% for work up to two weeks late i.e. a grade of 60% would become (60*0.7) 42%
    c. Assessment work received more than two weeks late should receive a mark of zero.

    Work is deemed late when an unauthorised missing of a deadline has occurred.

3. CA must be the student's own work, refer to Plagiarism Policy, in section 5.7 of the QA manual.

Three Private Lines (Leased Lines) were used to connect the Data Centers and Head Office such that there are two paths to reach any location. Even if one link between two locations goes down, there will be a backup link via a different route. Private Line for Malin (Donegal) site which is a greenfield site and Skerries (Dublin) has been recommended on best effort as the exact building name or location is not known for these sites. Two of the links are of 500Mbps and one is of 1Gbps.Speed mentioned might vary a bit for sites where exact building names were not known. It normally takes 2-3 months to get the setup ready for leased lines and hence it is advisable to contact Service Provider well in advance. It is assumed that the local networks at sites will be ready before work starts and Engineers or Technicians will be available to assist Service Provider with testing when the installation of leased lines is done. One Engineer/Technician and a Supervisor are recommended to be available. Permission for Service Provider Technicians if required, is advised to be taken in advance so that there is no delay in entering the site.

AirSpeed has been chosen as primary Internet service provider for all the sites including branch location. Eir is recommended for backup internet connection at Data Centers, Head Office and

branch location Sligo. All the backup internet lines are broadband connection of 100mbps, whereas, primary internet connections are DIA Fiber of 100mbps.Security from outside network is taken care by providing security device Firewall in High Availability mode at all the locations.

Branch location Sligo has been linked to all the primary sites (DCs and HO) via Data Centre at Cork. A virtual private network which works on Internet has been used for the connectivity. Since two internet connections are provided at Sligo, even if one goes down virtual private network will work over other connection. Core network devices at all sites have been designed for redundancy so that even if one device goes down another device will take over and service will not get affected much.

Senior Management can remotely access the applications when they are on road by using a web portal or a software client. Technical staff and Contractors too will be able to access devices remotely. Security measures have been implemented to make sure only the required access is given to remote workers.