Functional Area: Network Infrastructure & Operation (Operation / Support & Maintenance)

1.	Title	Perform traffic load balancing
2.	Code	ITCSNO421A
3.	Range	A network needs to move its traffic efficiently through traffic load balancing. Depending on the type of network technology and protocol selected for the network, load balancing can be performed manually or automatically. IP networks consist of various devices like routers and routing protocols like IGP, EGP, BGP, and QoS to perform load balancing. But in circuit switching networks will require additional network load balancing devices to move the traffics efficiently. This UoC concerns the tasks of performing network traffic load balancing by adjusting network components to a formulated optimal target level.
4.	Level	4
5.	Credit	4
6.	Competency	6.1 Possess the knowledge in the subject area Performance Requirement Exhibit the ability to:: • Critically understand network capacity management requirements and the required optimal operating characteristics of the network • Possess extensive experience with managing different types of network architectures i.e. connectionless or circuit switching network • Possess extensive knowledge of various network protocols like: IPv4, IPv6, IGP, EGB, BGP, • Possess extensive knowledge of routing and switching concepts and configure these types of equipment • Possess experience with load balancing software applications • Experienced with network traffic management tools, statistics analysis or performance reporting • Experienced with health and safety rules and hazards relating to the handling of equipment and tools while performing the load balancing process 6.2 Perform traffic load balancing Be able to: • Identify the current network traffic capacity and efficiency from analysing performance reports and analysing the traffic flow • Analyse the statistics and report together with various factors (e.g. vendor stated performances, user comments) and formulate an impression of the network overall performance • Identify where network traffic inefficiency occurs and formulate a load balancing plan which takes into consideration various risks and effects it will have. Also formulate "fall back" procedures • Liaise with various stakeholders to coordinate when and what load adjustment will be performed, any effects it may have and what, if any, coordination is required • Prepare for load balancing by defining a baseline for traffics or acquired from product manuals, setup measuring and monitoring facilities • Perform load balancing by adjustments/configuration/settings on the network components (switches, routers, RF transmitters, multiplexors, sensors, fibre transmitter, etc.) to achieve the target performance requirement • Document the load balancing process in accordance with the organisation's standards and policy

	6.3 Exhibit professionalism	• Follow the organisation's business plans and policies when planning the network load balancing • Follow the health and safety guidelines • Apply network configuration to ensure it follows the manufacturer operating standards and regulatory requirements

7. Assessment Criteria	The integrated outcome requirements of this UoC are the abilities to:
	  i. use reports/statistics/tools to determine network capacity status, bottleneck and points where improvement can be made
	  ii. plan and perform the load balancing of the network infrastructure capacity to fulfil the company and network components operating parameters	

Remark		