Functional Area: Network Infrastructure & Operation (Implementation)

1.	Title	Perform inter-working tests with other operators
2.	Code	ITCSNO414A
3.	Range	Once the intra-network is physically connected to other operators' network (inter-network), the next stage of the implementation process is to perform integration tests. Tests include physical transmission, OSS compatibility and functionality tests like authentication, roaming, billing, etc. This UOC concerns performing multi-operators network tests. Network in this context could be data and/or voice (VOIP), wireline or mobile network
4.	Level	4
5.	Credit	3
6. Competency		Performance Requirement
	6.1 Possess the knowledge in the subject area	• Extensively experienced with network testing methodologies and integration testing techniques • Possess extensive knowledge of various protocols standards and network technologies which could be wired-line or mobile network such as ATM, IP, GSM, LTE, NGN, MPLS, etc • Extensively experienced with preparing test plans, analysing test results, reading network infrastructure diagrams and configuration device settings • Extensively experienced with various testing tools and setting up of testing environment • Knowledgeable of inter-operator's network architectures or functionalities such as seamless mobile connection, users roaming, terminal connections, and services between administrative domains, etc. • Possess knowledge of health and safety rules and hazards relating to the equipment and/or tools being used during testing
	6.2 Perform inter-working tests with other operators	Be able to: • Locate and comprehend the test plans which specify the inter-network operability tests • Setup the appropriate tools and environments for measuring or recording of the tests • Perform the tests. More than one test cycle may be required and coordination with appropriate members of other operators may be required • Analyse the test results and ensure the tests were completed satisfactorily as per required by the test plan • Document the testing details and package the test results to formulate a test report to relevant stakeholders (supervisor, network designer, etc.)
	6.3 Exhibit professionalism	• Perform all tests as required by the test plan and suggest improvements to supervisors or test designers • Place the organisation's interest at foremost while working with external personnel • Always balance the interests of all stakeholders
7. Assessment Criteria		The integrated outcome requirements of this UoC are the abilities to: i. follow test plans and complete all required tests ii. prepare test environments with measuring tools to record test results iii. work and communicate effectively with opposite members of other operators in the preparation and performing of tests iv. complete the required tests and document the results with any special findings such as incompatibilities, unexpected results, etc. v. package the test report that conforms to the organisation's required standards and formats for submission to appropriate stakeholders
Remark		The test plan should include interoperability tests validating to standard reference architecture. It should cover key aspects of the architecture, including authentication, accounting, roaming, billing and settlement. The objective is to discover as many as possible critical technical gaps between other operators' implementations and the standard requirements. In many cases, these gaps were resolved, thereby increasing the products' readiness for actual deployment.