BUILDING SECURE NETWORK

UNIT CODE: SEC/CU/CS/CR/04/6/A

Relationship to Occupational Standards
This unit addresses the unit of competency: Build secure network

Duration of Unit: 120 hours

Unit Description
This unit covers the competencies required in building secure network. It involves confirming user requirements and network equipment, reviewing security issues, analyzing network security protocols and features, designing and perimeters, installing and configuring perimeter solutions, configuring internal network devices, testing and verifying design performance and preparing network report.

Summary of Learning Outcomes

1. Confirm user requirements and network equipment
2. Review security issues
3. Analyse network security protocols and features
4. Plan and design perimeter solution
5. Install and configure perimeter solutions
6. Configure internal network devices
7. Test and verify design performance
8. Prepare network report

Learning Outcomes, Content and Suggested Assessment Methods

Learning Outcome	Content	Suggested Assessment Methods
1. Confirm user requirements and network equipment	• Meaning of terms • Uses of network • Network requirements and equipment • Network topology • Network perimeters and bandwidth • Security perimeter	• Observation • Oral questioning • Written tests • Practical tests
2. Review security issues	• Meaning of terms • Network threats • Threats and vulenerablilties identification • Factors to consider in reviewing security	• Observation • Oral questioning • Written tests • Practical tests

Learning Outcome	Content	Suggested Assessment Methods
	issues • Identification and selection of security control measures	
3. Analyse network security protocols and features	• Meaning of terms • Types of network security protocols and standards • Application of network security protocols and standards • Factors to consider in network security protocol analysis	• Observation • Oral questioning • Written tests • Practical tests
4. Plan and design perimeter solution	• Meaning of terms • Factors to consider in designing perimeter solution • Designing perimeter schedule • Approval of perimeter schedule • Testing of perimeter design • Simulation of perimeter design	• Observation • Oral questioning • Written tests • Practical tests
5. Install and configure perimeter solutions	• Meaning of Terms • Factors to consider in acquiring perimeter solutions • Factors to consider in installation of perimeter solution • Configuration of perimeter solutions • Testing of perimeter solution	• Observation • Oral questioning • Written tests • Practical tests
6. Configure internal network devices	• Meaning of terms • Factors to consider in configuration of internal network devices • Types of internal network devices • Internal network devices compatibility tests • Integration of internal devices with security perimeter	• Observation • Oral questioning • Written tests • Practical tests

Learning Outcome	Content	Suggested Assessment Methods
7. Test and verify design performance	• Meaning of terms • Types of tests • System performance tests • Checking and debugging of errors • Threats simulation tests • Monitoring of security perimeter	• Observation • Oral questioning • Written tests • Practical tests
8. Prepare network report	• Meaning of terms • Preparation of networking report • Report dissemination • Report filing	• Observation • Oral questioning • Written tests

Suggested Methods of Instructions

- Discussions
- Site visits
- On-job-training
- Charts and Audio-visual presentations

Recommended Resources

Equipment	Reference materials
• Computers • Printers • Cameras • Phones	• Manufacturers' catalogues • EMCA Act • OSHA • County by-laws
Materials and supplies • Stationery	