



Australian Government

CPPSEC4019 Diagnose faults in networked security systems

Release: 1

CPPSEC4019 Diagnose faults in networked security systems

Modification History

Release 1 This version first released with CPP Property Services Training Package Release 9.0.

Supersedes and is equivalent to CPPSEC4019A Identify and diagnose security systems or network fault. Updated to meet the Standards for Training Packages.

Application

This unit specifies the skills and knowledge required to diagnose faults in a range of security systems and networks. It includes applying methodical diagnostic procedures, testing suspected fault scenarios, and assessing test results, historical information and operational data to diagnose system and network faults and recommend options for rectification.

This unit is suitable for those using specialised knowledge to complete routine and non-routine tasks and using their own judgement to deal with predictable and sometimes unpredictable problems.

This unit may form part of the licensing requirements for people engaged in security risk management in those states and territories where these are regulated activities.

Pre-requisite Unit

Nil.

Unit Sector

Security/Risk management

Elements and Performance Criteria

Elements describe the essential outcomes.

Performance criteria describe what needs to be done to demonstrate achievement of the element.

1 Prepare to diagnose security system or network faults.

1.1 Access and interpret key requirements of legislation, regulations and workplace policies and procedures, including work health and safety (WHS), and apply to work instructions to ensure compliance.

1.2 Review work instructions to confirm client requirements and work timeframes.

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| | 1.3 | Obtain and assess security system reports and clarify extent of faults in consultation with relevant persons. |
| | 1.4 | Review security system specifications and network configurations to confirm normal operational functions and performance parameters. |
| 2 Plan and organise work tasks. | 2.1 | Plan and prioritise work tasks allowing sufficient time to meet work instructions. |
| | 2.2 | Select and organise required materials, tools, testing devices and equipment including personal protective equipment and check for safe and correct operation. |
| | 2.3 | Arrange access to security system and network in consultation with relevant persons. |
| | 2.4 | Identify hazards in the work area and apply risk control measures. |
| 3 Conduct system and network testing and diagnostic procedures. | 3.1 | Use safe work practices when working with electronic equipment and cables according to WHS requirements. |
| | 3.2 | Isolate security equipment and system according to WHS requirements. |
| | 3.3 | Confirm normal performance of security equipment and system against specification schedules. |
| | 3.4 | Inspect and check security system components and test operation according to manufacturers' instructions. |
| | 3.5 | Methodically apply diagnostic methods using measurements and estimations of system operating parameters and network configurations. |
| | 3.6 | Test suspected fault scenarios to identify source of system or network problems. |
| | 3.7 | Assess test data, site variables, operational and historical information to support fault diagnosis. |
| | 3.8 | Diagnose fault or seek assistance from relevant persons to meet work instructions. |

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| 4 Recommend options for fault rectification and complete documentation. | 4.1 | Complete documentation detailing diagnosed faults and options for fault rectification supported by verifiable data according to workplace and regulatory requirements. |
| | 4.2 | Check tools and equipment for faults, wear or damage and rectify or report problems. |
| | 4.3 | Clean and restore work area and remove waste caused by work tasks. |

Foundation Skills

As well as the foundation skills explicit in the performance criteria of this unit, candidates require:

- reading skills to interpret key requirements of:
 - system installation plans and specifications
 - manufacturers' instructions.

Unit Mapping Information

Supersedes and equivalent to CPPSEC4019A Identify and diagnose security system or network fault.

Links

Companion volumes to this training package are available at the VETNet website - <https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=7e15fa6a-68b8-4097-b099-030a5569b1ad>

Assessment Requirements for CPPSEC4019 Diagnose faults in networked security systems

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Performance Evidence

To demonstrate competency, a candidate must meet the performance criteria of this unit by conducting testing and diagnostic procedures on three different networked security systems to diagnose:

- a minimum of two system faults
- a minimum of two network faults.

Knowledge Evidence

To be competent in this unit, a candidate must demonstrate knowledge of:

- workplace policies and procedures that ensure compliance with legislative and regulatory requirements when diagnosing faults in networked security systems:
 - licensing requirements and limits of own authority
 - regulatory requirements in the jurisdiction of operation
 - requirements for complying with Australian Communications and Media Authority cabling rules
 - work health and safety
- cable identification methods and techniques
- common computer commands used to verify and manage internet protocol (IP) and network performance
- difference between programming and configuration of security equipment and systems
- documentation to be completed when diagnosing faults in networked security systems to ensure compliance with licensing and warranty requirements
- fundamentals of routers, switches, firewalls and wireless access points
- fundamentals of scripting language
- keypad and control panel types and functions for a range of security equipment and systems
- local area network and wide area network capabilities
- meaning of multiple form factor authentication

- methods for ensuring IP networked systems and equipment are properly secured
- operational parameters and diagnostic testing procedures for a range of networked security systems:
 - access control systems
 - audible and visual warning devices
 - cameras and monitors
 - commercial and residential alarm systems
 - detection devices
 - electronic and mechanical fire safety and fire locking systems
 - electronic locks and locking systems
 - electronic readers
 - electronic screen equipment
 - intercoms and control panels
 - security doors and door controls
- principles of security system networking and integration including IP addresses and devices
- tests to confirm correct configurations, operation and connections for networked security systems
- tools and equipment used when diagnosing faults in networked security systems
- types of earthing systems used in electrical installations
- typical hazards encountered when diagnosing faults in networked security systems and the control measures for each:
 - confined spaces
 - electrical
 - hazardous materials and chemicals
 - hidden utilities
 - people in the work area
 - power tools
 - vermin.

Assessment Conditions

Assessors must meet the requirements for assessors contained in the Standards for Registered Training Organisations.

All individuals engaged by a licensed RTO for security licensing purposes must hold both a security trainers licence (where such a licence exists within the relevant jurisdiction) and the licence for performing the security activities for which the individual is providing training or assessment. Regulators may impose other assessor conditions to meet jurisdictional assessment requirements.

Assessment must be conducted in the workplace or in a simulated workplace environment. Candidates must have access to:

- legislation and licensing requirements that apply to diagnosing faults in networked security systems in the jurisdiction of operation
- work instructions, specifications, documentation, networked security systems and tools required to achieve the performance evidence.

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