Australian Government

Department of Education, Employment and Workplace Relations

MSS402061A Use SCADA systems in operations

Release: 1

INDUSTRY SKILLS COUNCILS

Creating Australia's Future

MSS402061A Use SCADA systems in operations

Modification History

New unit, superseding MSACMT261A Use SCADA systems in manufacturing - Equivalent

Unit Descriptor

This unit of competency covers the skills and knowledge required by an individual to interact with a System Control and Data Acquisition (SCADA) system as part of their job.

Application of the Unit

This unit applies to an individual in an organisation using a SCADA system and the individual must interface with that system. The individual will need to access this system as part of their routine and take actions based on the information they obtain from the SCADA system in accordance with procedures.
This unit requires the application of skills associated with using communication tools and technology for management of own work, planning and problem solving.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

Elements and Performance Criteria

1	Use operator interface	1.1	Identify SCADA terminals relevant to own work station and functions
		1.2	Use keyboards, track ball, monitor and/or stand alone controllers to access/interrogate system
		1.3	Use correct level of access and find all relevant screens and information
		1.4	Access message section and acknowledge messages
		1.5	Input and output information correctly according to program and organisation requirements
2	Use information	2.1	Obtain data and information from SCADA, as required, including process, supply and product chain data
		2.2	Interpret data and information as required by own job
		2.3	Find and use relevant historical data and information
		2.4	Use manufacturer manuals or specifications, as required, to expand knowledge of SCADA system relevant to own work
		2.5	Determine and prioritise required actions
3	Make required changes in accordance with procedures	3.1	Adjust production/process in response to SCADA information
		3.2	Record adjustments and variations to specifications/schedules and report to appropriate personnel
		3.3	Seek feedback and information on adjustments to further improve procedures, where required

Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

Required skills

Required skills include:

- using SCADA terminals and other input devices
- reading and interpreting electronic and hard copy SCADA operating instructions and documents, including where used:
  - work instructions
  - standard operating procedures
  - temporary instructions
  - other provided operating instructions
- working within security and access control requirements of the SCADA system
- identifying modules, screens, and so on, of SCADA system relevant to own work
- accurately inputting and outputting data
- searching and retrieving data
- accessing SCADA system nominated assistance, when required

Required knowledge

Required knowledge includes:

- technical knowledge needed to operate own work processes
- hierarchy of SCADA system and operation
- information available from and controls exercised by/through the SCADA system

Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Critical aspects for assessment and evidence required to demonstrate competency in this unit	A person who demonstrates competency in this unit must be able to provide evidence of the ability to: • identify the scope and relevance of the SCADA system to their own work

	• access correct levels of the SCADA system • enter and retrieve data, including normal performance and variations • use SCADA system to assist in own work.
Context of and specific resources for assessment	Assessment of performance must be undertaken in a workplace using or implementing one or more competitive systems and practices. Access may be required to: • workplace procedures and plans relevant to work area • specifications and documentation relating to planned, currently being implemented ,or implemented changes to work processes and procedures relevant to the assessee • documentation and information in relation to production, waste, overheads and hazard control/management • reports from supervisors/managers • case studies and scenarios to assess responses to contingencies.
Method of assessment	A holistic approach should be taken to the assessment. Competence in this unit may be assessed by using a combination of the following to generate evidence: • demonstration in the workplace • workplace projects • suitable simulation • case studies/scenarios (particularly for assessment of contingencies, improvement scenarios, and so on) • targeted questioning • reports from supervisors, peers and colleagues (third-party reports) • portfolio of evidence. In all cases it is expected that practical assessment will be combined with targeted questioning to assess underpinning knowledge. Where applicable, reasonable adjustment must be made to work environments and training situations to accommodate ethnicity, age, gender, demographics and disability.
Guidance information for assessment	Assessment processes and techniques must be culturally appropriate and appropriate to the oracy, language and literacy capacity of the candidate and the work being

	performed.

Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Competitive systems and practices	Competitive systems and practices may include, but are not limited to: • lean operations • agile operations • preventative and predictive maintenance approaches • monitoring and data gathering systems, such as SCADA software, Enterprise Resource Planning (ERP) systems, Materials Resource Planning (MRP) and proprietary systems • statistical process control systems, including six sigma and three sigma • Just in Time (JIT), kanban and other pull-related operations control systems • supply, value, and demand chain monitoring and analysis • 5S • continuous improvement (kaizen) • breakthrough improvement (kaizen blitz) • cause/effect diagrams • overall equipment effectiveness (OEE) • takt time • process mapping • problem solving • run charts • standard procedures • current reality tree Competitive systems and practices should be interpreted so as to take into account: • the stage of implementation of competitive systems and practices • the size of the enterprise

	• the work organisation, culture, regulatory environment and the industry sector
SCADA	SCADA refers to: • a number of systems which automatically collect critical process data, perform required mathematical manipulations on it and then make control decisions and/or give required information to personnel for action In some industry sectors, the SCADA system is sometimes integrated into other sophisticated computer control systems, such as Distributed Control System (DCS). These sectors may simply refer to their SCADA as the DCS or other similar term (such as the proprietary name of the computer system). SCADA systems may provide information from outside of the process, such as stock/material levels in a customer plant and/or available supply, supply rates and pricing from a supplier plant. This information may all be accessed by the SCADA system and the employee using it in order to make production rate and other control decisions (either automatically or human assisted) about their own operations and work processes
Supply and product chains	The supply chain Includes: • all suppliers in the chain from the initial raw material up to the current step in the operations process The product chain includes: • all steps after the current step up to the final customer Competitive systems and practices organisations encompass the entire production system, beginning with the customer, and includes: • the product sale • outlet • the final assembler • product design • raw material mining and processing • all tiers of the value stream (sometimes called the supply chain) Any truly 'competitive' system is highly dependent on the demands of its customers and the reliability of its suppliers. No implementation of competitive systems and practices can reach its full potential without including the entire 'organisation' in its planning

Procedures	Procedures may include: • work instructions • standard operating procedures • formulas/recipes • batch sheets • temporary instructions and similar instructions provided for the smooth running of the plant • good operating practice as may be defined by industry codes of practice (e.g. good manufacturing practice (GMP) and responsible care) • government regulations Procedures may be: • written, verbal, computer-based or in some other format

Unit Sector(s)

Unit sector Competitive systems and practices

Custom Content Section

Not applicable.