



Australian Government

ICTDRE402 Integrate data delivery modes

Release: 1

ICTDRE402 Integrate data delivery modes

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 2.0.

Application

This unit describes the skills and knowledge required to connect and configure a media centre that integrates signal for distribution.

It applies to individuals working as installers in the digital reception sector integrating services from multiple sources and in multiple formats (radio frequency, digital, data, and voice) for both inward and outbound signals into complex customer systems.

No licensing, legislative or certification requirements apply at the time of publication.

Unit Sector

Telecommunications – Digital Reception Technology

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1. Evaluate existing customer equipment	1.1 Obtain relevant legislation, codes, regulations and standards for compliance when conducting work 1.2 Notify customer to verify installation order and arrange for site access to comply with security arrangements 1.3 Notify supervisor of identified safety hazards at worksite and complete job safety analysis (JSA) before commencing work 1.4 Use test equipment to verify customer equipment is operational prior to installation 1.5 Assess equipment capabilities and connection types against customer requirements for suitability 1.6 Assess customer premises against installation plan according to

ELEMENT	PERFORMANCE CRITERIA
	client specifications and by-laws, standards and regulations 1.7 Produce an installation diagram using appropriate drawing symbols to indicate connection details of customer system
2. Design and build a multiple service customer system solution	2.1 Determine connection requirements and pathways for each service to be connected and locate a signal source for each service 2.2 Confirm compatibility for proposed pathway options connections to existing system and for optimal performance 2.3 Produce preliminary connection plan with block diagrams and specifications to optimise system performance 2.4 Evaluate connection plan design to determine any local spectrum management issues arising from multiple services 2.5 Produce final connection design with amendments to eliminate local spectrum management contentions, if required 2.6 Select and connect cables according to connection plan using appropriate materials 2.7 Activate equipment to check network operation 2.8 Resolve connection issues that arise during build phase and modify connection plan
3. Provide enterprise equipment with multiple services	3.1 Determine optimal method of connection to each service source according to client specifications 3.2 Connect service to system following work health and safety (WHS) and environmental requirements, and test to identify and rectify connection issues 3.3 Notify service provider if problems cannot be rectified locally, and escalate unresolvable connection issues accordingly
4. Configure services and optimise customer system across multiple services	4.1 Conduct client specific and customer set-up operations for each service 4.2 Test performance of enterprise and customer equipment across a range of settings 4.3 Test integrated performance of system across multiple services 4.4 Record and evaluate test results to satisfy manufacturer's operational margins 4.5 Tune customer equipment for optimal integrated performance across multiple services 4.6 Restore site to original condition and customer satisfaction
5. Train customer and	5.1 Conduct customer training appropriate to equipment, services and

ELEMENT	PERFORMANCE CRITERIA
complete contract documentation	vendor literature 5.2 Complete appropriate records and update administration systems according to enterprise policy 5.3 Record and store test results in appropriate database, leaving copies on site according to enterprise policy 5.4 Provide warranties to customer in required format where work and equipment are subject to warranty 5.5 Prepare invoices and other financial documentation where required and present to customer 5.6 Obtain authorised signatures on required documentation to confirm acceptance of completed work

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.1, 1.4-1.6, 2.4, 3.1, 4.2, 5.1	Interprets textual information from appropriate sources to identify relevant and key information
Writing	1.3, 1.7, 2.3, 2.5, 4.4, 5.2, 5.3, 5.5	Uses clear, specific and industry-related terminology to complete workplace documentation
Oral Communication	1.2, 1.3, 3.3, 5.1	Articulates clearly using appropriate language for environment, and uses listening techniques to confirm understanding
Numeracy	4.3, 5.5	- Takes readings and measurements and interprets results - Uses simple calculations to prepare financial documentation
Navigate the world of work	1.1, 5.4,	Takes responsibility for following safe, sustainable, appropriate, and efficient workplace procedures
Interact with others	5.6	Liaises with customer to sign-off on completed work when completed to customer's requirements
Get the work	1.3, 2.1, 2.2, 2.6-2.8, 3.2, 3.3, 4.1, 4.3,	Plans, organises and implements tasks efficiently to meet customer requirements

done	4.5, 4.6	• Makes decisions on technical requirements • Advises service provider of any problems that cannot be resolved locally
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Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTDRE402 Integrate data delivery modes	ICTDRE4167A Integrate data delivery modes	Updated to meet standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a53af4e4-b400-484e-b778-71c9e9d6aff2>

Assessment Requirements for ICTDRE402 Integrate data delivery modes

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Performance Evidence

Evidence of ability to:

- identify service requirements of a range of contemporary products
- design and build a multiple service customer system solution
- install and integrate at least two services to a customer system comprised of at least three equipment components applying all related work health and safety (WHS) requirements and work practices
- activate and optimise customer equipment using two or more signal sources
- configure services and optimise customer system across multiple services
- conduct functionality tests and interpret results
- provide customer training appropriate to the equipment.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- list contemporary equipment and connection methods
- outline customer service principles, particularly dealing with customers face to face
- discuss enterprise or service specific knowledge of products and services supplied
- describe equipment types:
 - amplifiers
 - couplers
 - taps
 - splitters
- describe home automation
- identify functions of home theatre system components
- explain modulation techniques

- discuss WHS general principles and enterprise specific job safety analysis (JSA) requirements
- assess performance adjustments for tuning, balancing and replacing components
- summarise quality assurance of enterprise requirements
- evaluate security systems
- review test analysis and diagnosis (enterprise diagnosis methods)
- identify test equipment and signal measurement and other enterprise-specific tools
- explain principles of video and audio technologies
- explain wireless local area networks (WLANs)
- explain wireless technology.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances should be typical of those experienced in the Telecommunications – Digital Reception Technology industry and include access to:

- a site for data delivery modes integration
- equipment currently used in industry
- test equipment required for data delivery integration.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

Links

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