



**Australian Government**

# **ICTSAS417 Undertake ICT system capacity planning**

**Release: 1**

# ICTSAS417 Undertake ICT system capacity planning

## Modification History

| Release   | Comments                                                                                                     |
|-----------|--------------------------------------------------------------------------------------------------------------|
| Release 1 | This version first released with ICT Information and Communications Technology Training Package Version 1.0. |

## Application

This unit describes the skills and knowledge required to monitor and assess the current and future capacity requirements of an information and communications technology (ICT) system, plan future enhancements and install the identified enhancements.

It applies to experienced individuals who work under limited supervision and use technical and specialised knowledge to undertake strategic planning and forecasting initiatives.

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

## Unit Sector

Systems administration and support

## 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. Analyse existing system capacity              | <ul style="list-style-type: none"><li>1.1 Review existing system configuration information, both hardware and software, to determine capacity issues</li><li>1.2 Investigate the current system workload and analyse its effect on the capacity to perform</li><li>1.3 Examine the current service level agreement (SLA) to determine agreed-upon capacity standards</li><li>1.4 Examine and analyse the fault logs for those caused by capacity problems</li><li>1.5 Discuss and review capacity issues with users</li><li>1.6 Document information gathered about the existing system</li></ul> |

| ELEMENT                                   | PERFORMANCE CRITERIA                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                           | workload and capacity according to organisational guidelines                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2. Determine future capacity requirements | <p>2.1 Interview the user to gather data about future system capacity requirements</p> <p>2.2 Organise, analyse and evaluate future requirements data to obtain a forecast workload for the system</p> <p>2.3 Using data and information gathered, compare existing workload with the forecast workload and evaluate to determine capacity problem areas</p> <p>2.4 Estimate resources and equipment required to resolve predicted capacity problems</p> <p>2.5 Undertake a financial analysis of the estimated capacity requirements</p> <p>2.6 Organise and document information according to organisational guidelines</p> <p>2.7 Prepare and present a report to appropriate person, detailing recommendations for capacity enhancements based on an analysis of documentation</p> |
| 3. Develop plan for capacity enhancements | <p>3.1 Develop a plan for implementing recommended enhancements, with prioritised tasks and minimum disruption to users</p> <p>3.2 Factor into the implementation plan the availability of finances, staff and other requirements</p> <p>3.3 Submit the implementation plan to appropriate person for approval and revision</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 4. Install capacity enhancements          | <p>4.1 Install capacity enhancements according to installation procedures, organisational guidelines and implementation plan</p> <p>4.2 Measure the increase in capacity and performance resulting from installed equipment to assess whether capacity requirements have been met</p> <p>4.3 Update documentation according to organisational guidelines to reflect the capacity enhancements</p>                                                                                                                                                                                                                                                                                                                                                                                      |
| 5. Monitor ongoing capacity requirements  | <p>5.1 Monitor and assess the impact of new technology and application development on capacity and performance</p> <p>5.2 Implement and maintain a performance database</p> <p>5.3 Review and assess benchmarks and performance regularly with work team to enable timely capacity enhancements and updates of benchmarks</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## 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, 2.3, 2.7, 5.3                  | <ul style="list-style-type: none"> <li>Researches and evaluates technical and non-technical information and numerical and financial data from a range of sources to determine benchmarks and performance indicators</li> </ul>                                                                                                                    |
| Writing              | 1.5, 1.6, 2.1, 2.6, 2.7, 3.1-3.3, 5.2   | <ul style="list-style-type: none"> <li>Accurately records information and numerical data, and prepares documentation using clear and accurate language to convey explicit information, requirements and recommendations</li> </ul>                                                                                                                |
| Oral Communication   | 1.5, 2.1, 3.3, 5.3                      | <ul style="list-style-type: none"> <li>Uses listening and questioning techniques to obtain and convey information</li> </ul>                                                                                                                                                                                                                      |
| Numeracy             | 2.3- 2.5, 3.1, 3.2, 4.2, 5.1-5.3        | <ul style="list-style-type: none"> <li>Uses mathematical equations to calculate, compare and estimate numerical and financial data required for forecasting and planning activities</li> </ul>                                                                                                                                                    |
| Interact with others | 1.5, 2.1, 2.7, 3.3, 5.3                 | <ul style="list-style-type: none"> <li>Selects and uses appropriate conventions and protocols when communicating with users, co-workers and others in a range of work contexts</li> <li>Collaborates with others to achieve shared goals</li> </ul>                                                                                               |
| Get the work done    | 1.1-1.6, 2.2-2.7, 3.1-3.3, 4.1, 5.1-5.3 | <ul style="list-style-type: none"> <li>Takes responsibility for planning, sequencing and prioritising tasks and own workload for efficiency and effective outcomes</li> <li>Applies analytical processes to resolve technical or conceptual problems</li> <li>Uses main features and functions of digital tools to complete work tasks</li> </ul> |

## Unit Mapping Information

| Code and title<br>current version | Code and title<br>previous version | Comments   | Equivalence status |
|-----------------------------------|------------------------------------|------------|--------------------|
| ICTSAS417                         | ICASAS417A                         | Updated to | Equivalent         |

| <b>Code and title<br/>current<br/>version</b> | <b>Code and title<br/>previous<br/>version</b> | <b>Comments</b>                                                                  | <b>Equivalence<br/>status</b> |
|-----------------------------------------------|------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------|
| Undertake ICT system capacity planning        | Undertake IT system capacity planning          | meet Standards for Training Packages.<br><br>Minor edit to the competency title. | 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 ICTSAS417 Undertake ICT system capacity planning

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## Performance Evidence

Evidence of the ability to:

- monitor and accurately assess current and future capacity requirements of a system and document outcomes
- predict and document capacity requirements, with forecasts being realistic and achievable
- plan and install capacity enhancements
- create and maintain required documentation.

Note: Evidence must be provided for at least TWO organisations or occasions.

## Knowledge Evidence

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

- analyse and describe the system's current functionality
- outline the key features of:
  - component performance management
  - current industry accepted hardware and software products
  - financial analysis
  - client business domain
  - performance monitoring tools
  - quality assurance practices with regard to proposed Information and Communications Technology (ICT) capability enhancements
  - service level agreements relating to proposed ICT capability enhancements
  - role of stakeholders and the degree of stakeholder involvement.

## 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 must be typical of those experienced in the systems administration and support field of work, and include access to:

- special purpose tools, equipment, materials and
- industry software packages
- live system
- service level agreements
- fault logs
- users
- hardware components for installation.

Assessor must satisfy NVR/AQTF assessor requirements.

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