



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **ICANWK414A Create a common gateway interface script**

**Release: 1**

## ICANWK414A Create a common gateway interface script

### Modification History

| Release   | Comments                                                                                                          |
|-----------|-------------------------------------------------------------------------------------------------------------------|
| Release 1 | This Unit first released with <i>ICA11 Information and Communications Technology Training Package version 1.0</i> |

### Unit Descriptor

This unit describes the performance outcomes, skills and knowledge required to define and produce common gateway interface (CGI) script and install that script on a server.

### Application of the Unit

This unit applies to individuals in the network or web development area who are required to use CGI scripting as a common means of interacting with websites, providing security access to directories and databases.

Internet access to server CGI scripts provides a powerful means to control a wide variety of operations on the server.

### Licensing/Regulatory Information

No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement but users should confirm requirements with the relevant federal, state or territory authority.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

| Element                                                                  | Performance Criteria                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Elements describe the essential outcomes of a unit of competency.</i> | <i>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.</i> |

## Elements and Performance Criteria

|                                        |                                                                                                                                                                                                                                                                                                |
|----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Define specification for CGI script | 1.1 Determine the functionality of the CGI <b>form</b><br>1.2 Define the functionality of the CGI script<br>1.3 Choose the appropriate <b>language</b> in which to write the CGI script<br>1.4 Determine <b>server requirements</b>                                                            |
| 2. Create CGI form and write script    | 2.1 Produce a hypertext markup language (HTML) web document that uses the form elements required by the <b>CGI script specification</b> and includes the uniform resource locator (URL) for the CGI script<br>2.2 Write the CGI script to function as required by the CGI script specification |
| 3. Test CGI script                     | 3.1 Configure the <b>server</b> , if required, that will host the CGI script<br>3.2 Upload the CGI script to the server<br>3.3 Run the CGI form and assess its output<br>3.4 Reiterate until the specification for the CGI script is met                                                       |

## Required Skills and Knowledge

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

### Required skills

- communication skills to liaise with internal and external personnel on technical, operational and business-related matters
- literacy skills to write network documentation in required formats and maintain records
- numeracy skills to interpret technical data
- planning and organisational skills to plan, prioritise and monitor own work
- research skills to gain and maintain current industry technical knowledge
- technical skills to:
  - interpret and write HTML
  - use basic operating system commands
  - use file transfer protocol (FTP) clients.

### Required knowledge

- detailed knowledge of:
  - a scripting language
  - CGI 1.1/1.2 specifications
  - security issues surrounding CGI
  - web servers
- overview knowledge of:
  - Copyleft and Free Software Foundation
  - special features relating to copyright and intellectual property.

## 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.*

|                                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Overview of assessment</b>                                                                       |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b> | <p>Evidence of the ability to:</p> <ul style="list-style-type: none"> <li>• review the requirements</li> <li>• produce CGI forms and scripts to meet the requirements</li> <li>• upload scripts to a server</li> <li>• test the script, and rework until requirements is met.</li> </ul>                                                                                                                                                                                                                                                                                                                |
| <b>Context of and specific resources for assessment</b>                                             | <p>Assessment must ensure access to:</p> <ul style="list-style-type: none"> <li>• web servers</li> <li>• ebusiness website</li> <li>• FTP or file transfer client software</li> <li>• server access</li> <li>• appropriate learning and assessment support when required</li> <li>• modified equipment for people with special needs.</li> </ul>                                                                                                                                                                                                                                                        |
| <b>Method of assessment</b>                                                                         | <p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> <li>• verbal or written questioning to assess candidate's knowledge of:             <ul style="list-style-type: none"> <li>• scripting language</li> <li>• security issues surrounding CGI</li> </ul> </li> <li>• evaluation of candidate's CGI form</li> <li>• review of candidate's CGI script.</li> </ul>                                                                                                     |
| <b>Guidance information for assessment</b>                                                          | <p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, where appropriate.</p> <p>Assessment processes and techniques must be culturally appropriate, and suitable to the communication skill level, language, literacy and numeracy capacity of the candidate and the work being performed.</p> <p>Indigenous people and other people from a non-English speaking background may need additional support.</p> <p>In cases where practical assessment is used it should be combined with targeted questioning to assess required knowledge.</p> |



## 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.*

|                                                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b><i>Form</i></b> may include:                      | <ul style="list-style-type: none"> <li>• hidden form tags</li> <li>• on or off flags</li> <li>• scrollable text box</li> <li>• selection lists</li> <li>• single selection buttons</li> <li>• submit and reset</li> <li>• text box.</li> </ul>                                                                                                                                                                                                                      |
| <b><i>Language</i></b> for CGI may include:          | <ul style="list-style-type: none"> <li>• AppleScript</li> <li>• C or C++</li> <li>• Perl</li> <li>• Python</li> <li>• shell script</li> <li>• Visual Basic.</li> </ul>                                                                                                                                                                                                                                                                                              |
| <b><i>Server requirements</i></b> may include:       | <ul style="list-style-type: none"> <li>• ability to FTP documents to a server</li> <li>• remote desktop</li> <li>• secure shell access</li> <li>• Telnet to a server or Telnet-only access on another server</li> <li>• VPN.</li> </ul>                                                                                                                                                                                                                             |
| <b><i>CGI script specifications</i></b> may include: | <ul style="list-style-type: none"> <li>• CGI/1.1 specification</li> <li>• CGI/1.2 specification.</li> </ul>                                                                                                                                                                                                                                                                                                                                                         |
| <b><i>Server</i></b> may include:                    | <ul style="list-style-type: none"> <li>• Apache HTTP server</li> <li>• BEA Weblogic servers</li> <li>• email servers</li> <li>• file and print servers</li> <li>• FTP servers</li> <li>• IBM VisualAge and WebSphere</li> <li>• iPlanet-Enterprise</li> <li>• Lotus Domino</li> <li>• Microsoft-Internet-Information-Server</li> <li>• NetDynamics</li> <li>• Netscape Enterprise Server, Netscape-FastTrack, Netscape-Commerce</li> <li>• proxy servers</li> </ul> |

|  |                                                                                                                                   |
|--|-----------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"><li>• Sun Microsystems iPlanet Web Server</li><li>• Sun Microsystems Java Web Server.</li></ul> |
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## **Unit Sector(s)**

Networking