



Australian Government

ICTTEN821 Manage solution architecture and impacts

Release: 1

ICTTEN821 Manage solution architecture and impacts

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 7.0.

Application

This unit describes the skills and knowledge required to analyse business options to plan, develop and manage solution architecture systems integration across multiple architectures for a network service provider.

It applies to individuals with excellent technical, communication and planning skills working in project management roles with authority to direct installation activities.

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

Unit Sector

Telecommunications Networks Engineering

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. Develop plan to support architectural design process	1.1 Prepare a plan with techniques to support the architectural design process and communicate the solution to different stakeholder groups 1.2 Analyse business options to support architectural design trade-offs for optimal design solution 1.3 Evaluate strengths and weaknesses of required technologies in context of the requirement 1.4 Assess a range of interdisciplinary concept ideas and effect their attributes would have on the design requirements 1.5 Prepare a solutions architecture plan detailing all possible solutions
2. Develop interface	2.1 Evaluate system element interfaces and sources of complexity for

ELEMENT	PERFORMANCE CRITERIA
requirements for effective solutions across multiple architectures	interface management of the system across multiple architectures 2.2 Develop a process and required techniques to be adopted for interface management of system elements for solution architecture 2.3 Produce a control process of system element interfaces of the management system 2.4 Liaise and arbitrate between stakeholders where there are conflicts in definition of interfaces
3. Manage solution architecture systems integration	3.1 Evaluate suitability of system integration, verification and validation plans for solution architecture from requirements 3.2 Develop systems integration, verification and validation plans for complex systems to confirm viable integration process 3.3 Manage system integration plan and diagnose complex faults 3.4 Document fault conditions, report to relevant person and follow up corrective actions 3.5 Prepare evidence for customer acceptance and certification of system integration management plan 3.6 Plan and manage a transition to operational activity for the solution architecture
4. Manage solution implementation and notify stakeholder groups	4.1 Produce final project management requirements against solution architecture plan and notify stakeholder groups of impending implementations 4.2 Evaluate impact of proposed project solutions on customers and enterprise 4.3 Manage solution architecture activities as part of overall project plan and monitor solution architecture risks 4.4 Manage amendments to solution architecture processes to meet needs of the project and apply necessary corrective actions

Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance but not explicit in the performance criteria.

SKILL	DESCRIPTION
Oral communication	Participates in verbal exchanges using tone and language required for the audience and environment
Reading	Organises, evaluates and interprets a range of complex documentation such as software and hardware manuals
Writing	Prepares workplace documentation, including recommendations,

SKILL	DESCRIPTION
	incorporating technical language to communicate complex information clearly and effectively
Teamwork	• Selects and uses required conventions and protocols when communicating with stakeholders in a range of work contexts • Collaborates and negotiates to achieve agreeable outcomes in potentially contentious situations
Planning and organising	• Operates from a broad conceptual plan, developing operational detail in stages, regularly reviewing priorities and performance during implementation, identifying and addressing issues • Takes responsibility for high-impact decisions in complex situations involving many variables and constraints • Uses formal analytical and lateral thinking techniques to resolve domain, technology and logistics problems • Monitors outcomes of decisions, considering results from a range of perspectives and identifying key concepts and principles and their impact on customers and enterprise
Technology	• Demonstrates a sophisticated understanding of principles, concepts, language and practices associated with the digital world and uses this to prepare proposals

Unit Mapping Information

Supersedes and is equivalent to ICTTEN805 Manage solution architecture and impacts in line with organisational processes.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for ICTTEN821 Manage solution architecture and impacts

Modification History

Release	Comments
Release 1	This version first released with ICT Information and Communications Technology Training Package Version 7.0.

Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- manage solution architecture and impacts for at least two projects.

In the course of the above, the candidate must:

- prepare architecture plans exploring solutions
- develop interface requirements for effective solutions across multiple architectures
- manage solution architecture systems integration
- analyse impact of proposed project solutions on customers and enterprise
- prepare evidence for customer acceptance and certification of system integration management plan
- produce final project management requirements.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- required legislation, codes, company work practices, regulations and standards, workplace health and safety (WHS) requirements for scoped work
- features and operating requirements of complex systems, key performance indicators (KPI) and service level agreements
- information required to define solution architecture and impacts in line with organisational processes
- interdisciplinary concepts across multiple architectures
- issues and challenges occurring with system changes
- manufacturer requirements for operation of systems equipment
- required organisational policies and procedures
- performance and integration requirements

- solutions architecture alternatives
- system element interfaces for solution architecture
- system integration plans
- validation plans.

Assessment Conditions

Skills in this unit must be demonstrated in a workplace or simulated environment where the conditions are typical of those in a working environment in this industry.

This includes access to:

- a site where development and management of solution architecture systems integration across multiple architectures may be conducted
- software tools currently used in industry
- vendor products, specifications, equipment and enterprise policy required for the activity.

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

Links

Companion Volume Implementation Guide is found on VETNet -

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