ESKITP902401

Deliver Network Designs and Specifications

Overview

This sub-discipline Network Design (902) is concerned with the competencies required for network design in order to ensure that the business has a fit for purpose network infrastructure system. This includes overall network system design and the selection of hardware and software components that will meet the organisations requirements for the intended dimension of network traffic. A typical network will include any type of transmission medium and interface to a wide variety of wired and wireless devices which will support the delivery of products and services.

This sub discipline requires not only technical knowledge of individual hardware and software network products and services (or any combination of these) but also the architectural principles, standards and protocols that must be applied within the design of the network infrastructure. It is envisaged that those involved in network design should have a broad knowledge of all aspects of networking in order to produce the network designs, policies and documentation covering all transmission mediums in order to support the business requirements and strategy. This may include all aspects of communications infrastructure, internal and external, mobile, public and private, intranet and internet.

Working in the professional network design role (9024) is primarily focussed on the production of outline network designs and specifications including the translation of logical design into physical design for networks.

Performance criteria

You must be able to:

1. source and collate relevant information to show the capabilities and availability of network hardware and software products and services
2. undertake enterprise network infrastructure designs in line with standard organisational procedures
3. undertake network topology design to determine accurate positioning of network components
4. undertake network synthesis design to determine the correct specification of network components to be used
5. determine how to meet network capacity requirements in line with organisational standards
6. predict accurate reliability levels in the network design
7. make well-reasoned decisions to effectively incorporate network and hardware products and services into the network infrastructure design
8. source internal and external expertise in particular network infrastructure products and services as required, in line with organisational procedures
9. identify network infrastructure design to meet customer demands and service requirements
10. identify the advantages and disadvantages of using particular network infrastructure products or services within the network infrastructure in line with organisational requirements
11. document the network design and prepare standard design reports in line with standard organisational procedures
12. present appropriate information on network designs to key stakeholders and customers in line with organisational requirements

Knowledge and understanding

You need to know and understand:

1. the systems development lifecycle and how this is applied to the delivery of network designs and specifications
2. the range of tools and techniques used for network design and how to use them
3. information about the capabilities and availability of network technology products, services and equipment
4. how to make well-reasoned decisions on the inclusion of network technology products, services and equipment for network design
5. how to reference operational information relating to incidents, problems, changes, events and service availability
6. how to perform and guide infrastructure design
7. the different approaches that may apply to the design of hardware, software and network infrastructure products/services and or equipment
8. the internal and external standards that apply to network infrastructure design
9. the potential implications of poor quality infrastructure design on the operation of an organisation
10. the importance of defining clear customer requirements for network infrastructure designs
11. how to document procedures for data analysis
12. the impact that network design has on organisational performance and service offerings

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