



Australian Government

ICTNWK617 Configure and manage a storage area network

Release: 1

ICTNWK617 Configure and manage a storage area network

Modification History

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

Application

This unit addresses the knowledge, processes and techniques necessary to configure and manage a Storage Area Network (SAN) which are widely used in the enterprise datacenter space and when coupled with server virtualisation technology, form the basis for highly available datacentres.

It applies to specialist technicians and storage engineers who manage and maintain highly available data storage in a networked environment.

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

Unit Sector

Networking

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. Determine specifications for a Storage Area Network	1.1 Analyse and document client requirements. 1.2 Analyse and document the required topology to support a storage area network. 1.3 Analyse and determine the required storage capacity according to current and future business requirements. 1.4 Determine the storage protocols to be used to meet organisational requirements. 1.5 Determine the requirements for network management, backup, security and redundancy, according to organisational policy.

ELEMENT	PERFORMANCE CRITERIA
	1.6 Analyse and recommend a SAN model based on client design requirements.
2. Configure network settings on a Storage Area Network filer/node.	2.1 Configure the initial SAN Network settings to facilitate network communication using the recommended process. 2.2 Configure Management Interface address to allow configuration of remaining network interfaces. 2.3 Create logical interfaces to support network-attached storage (NAS) protocols 2.4 Create logical interfaces to support SAN protocols 2.5 Configure virtual local area networks (VLAN) to segment the network according to the design brief
3. Provision storage	3.1 Create aggregate/s using recommended redundant array of independent disks (RAID) levels in accordance with the documented design brief. 3.2 Create logical volume/s in accordance with the documented design brief. 3.3 Create logical unit number/s (LUN) in accordance with the documented design brief. 3.4 Provision a share using NAS protocols in accordance with the documented design brief. 3.5 Provision storage using SAN protocols in accordance with the documented design brief.
4. Connect client and/or server to provisioned storage.	4.1 Connect client and/or server to shared storage using NAS protocols and verify operations. 4.2 Connect client to shared storage using SAN protocols and verify operations.
5. Configure advanced Storage Area Network Features.	5.1 Provision and test SAN based volume snapshot operations. 5.2 Provision and test SAN based data deduplication operations.
6. Configure Backup and Disaster recovery features.	6.1 Provision and test SAN based data replication operations. 6.2 Provision and test SAN based backup and restore operations.

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, 2.1, 3.1, 3.2, 3.3, 3.4, 3.5, 4.1, 4.2	Recognises and interprets technical and organisational documentation to determine and confirm job requirements.
Writing	1.1, 2.2, 3.1, 3.3	Develops a range of workplace documentation for a specific audience using clear and detailed language in order to convey explicit information, requirements and recommendations.
Oral Communication	1.1, 3.1	- Uses listening and questioning skills to confirm understanding for requirements - Establishes and maintains complex and effective spoken communication in a broad range of contexts
Navigate the world of work	1.4, 1.5	Recognises and responds to both explicit and implicit protocols within familiar work contexts and appreciates the importance of identifying and responding to protocols in new situations
Get the work done	1.2, 2.1, 2.2, 2.4, 2.5, 3.1, 3.2, 3.3, 3.4, 3.5, 4.1, 4.2, 5.1, 5.2, 6.1, 6.2	- Demonstrates a sophisticated understanding of principles, concepts, language and practices associated with the digital world - May operate from a broad conceptual plan, developing the operational detail in stages, regularly reviewing priorities and performance during implementation, identifying and addressing issues - Actively identifies systems, devices and applications with potential to meet current and/or future needs - Uses nuanced understanding of context to recognise anomalies in a virtualised machine environment and subtle deviations to normal expectations, focussing attention and remedying problems promptly

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICTNWK617 Configure and	Not applicable	New unit	No Equivalent unit

Code and title current version	Code and title previous version	Comments	Equivalence status
manage a storage area network			

Links

Companion Volume implementation guides are found in VETNet -

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