T Level Technical Qualification in Digital Support Services

Occupational specialism assessment (OSA)

Digital Infrastructure

Assignment 2

Mark scheme

NCFE

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Contents

Marking guidelines

You must apply the following marking guidelines to all marking undertaken throughout the marking period. This is to ensure fairness to all students, who must receive the same treatment. You must mark the first student in exactly the same way as you mark the last.

The mark scheme must be referred to throughout the marking period and applied consistently. Do not change your approach to marking once you have been standardised.

The marks awarded for each response should be clearly and legibly recorded.

If you are in any doubt about the application of the mark scheme, you must consult with your team leader or the chief examiner.

Task 1

(4 marks)

Criteria	Marks	Guidance
Network cable creation	1	All the copper connectors connect with the cable
	1	All the ends of the cable are arranged correctly
	1	The plastic cover is at the right depth to catch under the fixing in the RJ45 end
	1	The cable tester lights show that each strand is working correctly

Note: Follow through marks can be awarded if the individual cables are not in the correct order, but the lights correctly display.

Task 2

Step A

(3 marks)

Criteria	Marks	Guidance
Operating system installation – Server01	1	All 5 steps must be completed successfully to be awarded the mark: • operating system installed • suitable region and language settings • disk partitions • machine named correctly • fixed IP addressing set
Operating system installation – Server02	1	All 5 steps must be completed successfully to be awarded the mark: • operating system installed • suitable region and language settings • disk partitions • machine named correctly • fixed IP addressing set
Operating system installation – PC01	1	All 4 steps must be completed successfully to be awarded the mark: • operating system installed • suitable region and language settings • disk partitions • machine named correctly

Step B

(8 marks)

Criteria	Marks	Guidance
Install and configure DNS	1	Print screen showing DNS has been installed
Install and configure a directory service	1	Print screen showing the directory service has been installed and configured
Install DHCP service on Server01	1	Print screen showing the DHCP service installed
Implement a DHCP scope using the IP range provided: DHCP Scope – 10.1.1.5-10.1.1.10	1	Print screen showing the DHCP scope configured
Evidence PC01 is using DHCP to join the network	1	Print screen showing PC01 has been assigned a DHCP address. This could be from a command line or a GUI window. If it only states DHCP acquired and no visible IP address provided, then the mark cannot be awarded. A valid IP address must be in the range set out in the scope
Domain join Server02 and PC01 to Server01 forming the start of the network	1	Print screen showing Server02 domain joined
	1	Print screen showing PC01 domain joined
Install and confirm a reverse DNS lookup works on Server02 using NSLOOKUP	1	Print screen showing Server02 successfully completed a reverse lookup

Step C

(8 marks)

Criteria	Marks	Guidance
Create the groups in the directory service	1	Mark awarded if the following 5 groups have been created: • all staff • developer • graphics • motion capture • IT admin
Populate active directory with 4 users, assign privileges and add to groups	1	Both correct username and privilege required for the mark: • your first and surname – administrator • Paul James – standard user • Tamara Jacobs – standard user • Yousif Sobbah – standard user
	1	Each user correctly added to the required groups for the mark. • your first and surname – IT admin • Paul James – development • Tamara Jacobs – graphics • Yousif Sobbah – motion capture
Use the groups to populate the permissions for the folders created	1	Evidence has been provided that the following users have permissions on the folders: • development – IT admin – read and write • graphics – development – read and write • motion capture – motion capture – read and write • shared drive – all staff – read • user guides – all staff – read, IT admin – read and write • IT admin – IT admin – read and write
Evidence of folder testing with both valid and invalid user accounts has been provided	0–4	This is a levels-based mark scheme. Award between 0 marks and 4 marks as follows:
	4	Test plan has been completed accurately and all folders have been tested with both valid and invalid users
	3	Test plan may be complete, but not necessarily accurate throughout. All folders have been tested and work correctly
	2	Test plan may be limited in its effectiveness but shows some understanding. Most folders have been tested and appear to work correctly
	1	No test plan, or test plan is ineffective. Only a few folders work correctly
	0	No creditworthy material

Step D

(3 marks)

Criteria	Marks	Guidance
Configuring and running a backup	1	Evidence has been provided showing the settings of the backup
	1	Evidence has been provided that the backup has been taken
Restore process	1	One mark for successfully restoring the backup to a different location

Step E

(4 marks)

Criteria	Marks	Guidance
Installation: • desktop deployment • media server • database server • IT helpdesk • web server • print server	1	Successfully installed the service from the list of allowed services **Note:** If another service has been installed, this mark cannot be awarded but all subsequent marks can if the complexity of the installation is commensurate with the list provided
Configuration	1	Evidence has been provided showing that the service has been configured
Activation	1	Evidence has been provided showing that the service is running on the server
Testing	1	Evidence has been provided showing that the service can be used, either on the server directly or from another machine

Step F

(2 marks)

Criteria	Marks	Guidance
Configuration	1	Evidence has been provided showing either RDP, VPN or other solution has been set up correctly No mark awarded if the PC02 is domain joined
Accessing	1	Evidence of remote desktop access has been shown on PC02

Step G

(4 marks)

Criteria	Marks	Guidance
SNMP enabled on each machine	1	Print screen showing SNMP enabled on Server02
	1	Print screen showing SNMP enabled on PC01
SNMP data is being collected and can be viewed	1	SNMP trap set to capture the information on Server01
	1	Evidence that SNMP data is being captured on Server01

Step H

(10 marks)

Criteria	Marks	Guidance
5 security-based policies created on Server01 **Note:** No mark awarded if the policy is not security-based, for example, preventing USB drives	1	Valid security-based policy 1 created
	1	Valid security-based policy 2 created
	1	Valid security-based policy 3 created
	1	Valid security-based policy 4 created
	1	Valid security-based policy 5 created

Criteria	Marks	Guidance
Testing the applied policy on PC01 **Note**: If the policy is not security-based but has been applied correctly, the marks in this part of the task can still be awarded	1	Valid security-based policy 1 applied, tested on PC01
	1	Valid security-based policy 2 applied, tested on PC01
	1	Valid security-based policy 3 applied, tested on PC01
	1	Valid security-based policy 4 applied, tested on PC01
	1	Valid security-based policy 5 applied, tested on PC01

Step I

(7 marks)

Criteria	Marks	Guidance
Installation and configuration of the wireless device	1	IP address has been set
	1	Wireless AP device has been connected
	1	The required drivers and/or management software have been installed
	1	E The device has been configured with suitable settings
	1	Evidence that SNMP data is being captured on Server01
Evidence of testing from 2 machines that the wireless device can be accessed	1	Evidence that the device can be used from 1 machine
	1	Evidence that the device can be used from another machine

Performance outcome grid

Task	PO1	PO2	PO3	Total
1		4		4
2	10	39		49
Total marks	10	43		53
% Weighting	19%	81%		100%

Document information

The T Level Technical Qualification is a qualification approved and managed by the Institute for Apprenticeships and Technical Education.

Owner: Head of Assessment Design

Change History Record

Version	Description of change	Approval	Date of Issue
v1.0	Post approval, updated for publication.		December 2020
v1.1	Branding and formatting final updates. NCFE rebrand.		September 2021
v1.2	Sample added as a watermark	November 2023	17 November 2023