

T Level Technical Qualification in Digital Support Services

Occupational specialism assessment (OSA)

Digital Infrastructure

Assignment 2

Mark scheme

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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.

Past Paper

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 Installing and Configuring Servers

(5 marks)

Criteria	Marks	Guidance
Operating System installation – Server01	1	Evidence must show: <ul style="list-style-type: none">• Server01 with name set
Local Administrator: Administrator / Pa\$\$w0rd	1	<ul style="list-style-type: none">• Server01 with disk partitions
Connect Server machines to a switch	1	Evidence must show: <ul style="list-style-type: none">• Server(s) have been connected to a switch
Provide each server with an appropriate IP address	1	<ul style="list-style-type: none">• Server01 and Server02 have been configured with appropriate IP addresses
Confirm network connectivity between Server01 and Server02	1	Evidence must show: <ul style="list-style-type: none">• Successful network connection between Server01 and Server02 (for example Ping, Test-NetConnection)

Step B Domain Setup

(6 marks)

Criteria	Marks	Guidance
Install and configure a Directory Service on Server01	1	Evidence must show: <ul style="list-style-type: none">a suitable directory service (for example Active Directory) has been installed on Server01
Install and configure DNS on Server01	1	Evidence must show: <ul style="list-style-type: none">DNS has been installed on Server01
Install DHCP service on Server01	1	Evidence must show: <ul style="list-style-type: none">DHCP has been installed on Server01
Implement the DHCP scope provided on Server01	1	Evidence must show: <ul style="list-style-type: none">DHCP scope has been configured to match scenario requirement (192.168.1.11-192.168.1.20)
Join Server02 to the domain	1	Evidence must show: <ul style="list-style-type: none">Server02 has been joined to the domain
Confirm a reverse DNS lookup works on Server02 using Nslookup	1	Evidence must show: <ul style="list-style-type: none">Nslookup command is used and shows Server02 can access domain resources (shows Server01 IP address clearly: 192.168.1.1)

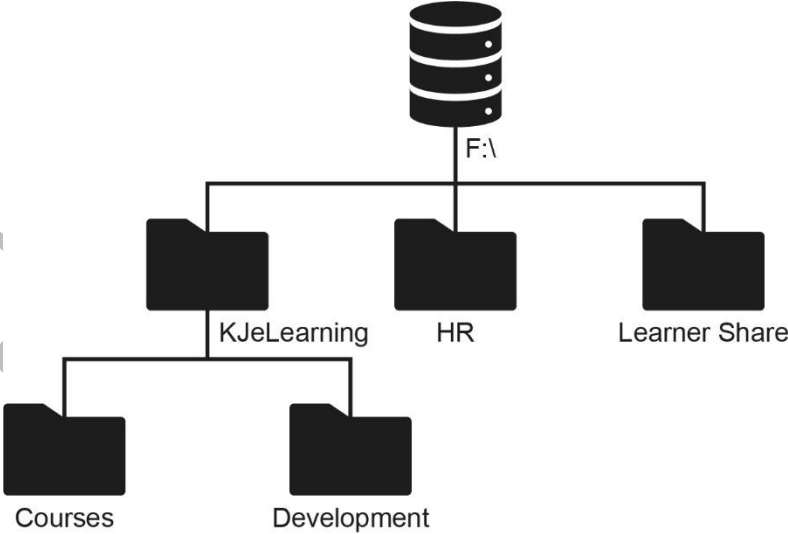
Step C User and Group Setup

(4 marks)

Criteria	Marks	Guidance
Create the organisational units (OU) in the directory service	1	Evidence must show: <ul style="list-style-type: none">the 5 provided OUs (Managers, Staff, Learners, Teachers, IT) have been created within the directory service
Create users in the directory service	1	Evidence must show: <ul style="list-style-type: none">a user has been set up with the correct settings
Assign users to groups in the directory service	1	Evidence must show: <ul style="list-style-type: none">Managers group has been created
Add groups to the Staff group	1	Evidence must show: <ul style="list-style-type: none">Staff group should contain the following groups: Managers, IT, Teachers

Step D Shared Folder Setup

(6 marks)

Criteria	Marks	Guidance
Create the required folder structure on the F:\ drive on Server01	1 1 1	<p>Evidence must show:</p> <ul style="list-style-type: none">the F:\ drive has been used for the folder structurefolders have been createdhierarchical structure matches requirements  <pre>graph TD; F["F:\"] --- KJeLearning; F --- HR; F --- LearnerShare[Learner Share]; KJeLearning --- Courses; KJeLearning --- Development;</pre> <p>The diagram illustrates the required folder structure on the F:\ drive. At the top level, there are three folders: KJeLearning, HR, and Learner Share. The KJeLearning folder is further subdivided into two subfolders: Courses and Development.</p>
<p>Apply appropriate permissions to the KJeLearning folder to ensure access is only available to those authorised:</p> <p>Managers and Teachers should have 'change' access to this folder</p> <p>IT should have 'full control' access to this folder</p> <p>Learners should not be able to access this folder</p>	1	<p>Evidence must show:</p> <ul style="list-style-type: none">relevant permissions have been applied to the folder

Criteria	Marks	Guidance
<p>Apply appropriate permissions to the HR folder to ensure access is only available to those authorised:</p> <p>Only Managers should have access to the HR folder, all other users should have no access</p>	1	<p>Evidence must show:</p> <ul style="list-style-type: none"> relevant permissions have been applied to the folder
<p>Apply appropriate permissions to the Learner Share folder to ensure access is only available to those authorised:</p> <p>Learners should have 'change' access to this folder</p> <p>Teachers should have 'full control' access to this folder</p>	1	<p>Evidence must show:</p> <ul style="list-style-type: none"> relevant permissions have been applied to the folder

Step E Client Computer Setup and Test

(10 marks)

Criteria	Marks	Guidance
Install the provided operating system on PC01	1 1	Evidence must show: <ul style="list-style-type: none"> PC01 with computer name set PC01 with disk partitions
Configure and confirm network settings on PC01 to ensure the computer is on the domain	1 1 1	Evidence must show: <ul style="list-style-type: none"> PC01 is connected to the correct switch/virtual switch PC01 joined to the domain PC01 network configuration shows expected settings (for example IP address within the DHCP scope)
Confirm user John Richardson has access to relevant shared folder on network	1 1	Evidence must show: <ul style="list-style-type: none"> user John Richardson has access to shared folders user John Richardson can access shared HR folder
Confirm user Bhindi Hussain has access to relevant shared folder on network	1	Evidence must show: <ul style="list-style-type: none"> user Bhindi Hussain can access Learner Share and create folder and/or documents
Confirm user Natalia Sobbah has correct access to relevant shared folder on network	1 1	Evidence must show: <ul style="list-style-type: none"> user Natalia Sobbah cannot access HR documents user Natalia Sobbah can access Learner Share and can delete the folder 'Bhindi'

Step F Configuring Server Backup

(7 marks)

Criteria	Marks	Guidance
Add an additional hard disk drive to Server02	1 1	Evidence must show: <ul style="list-style-type: none"> additional HDD has been added to Server02 (physical or virtual) new disk has been setup in Disk Management
Install Windows Server Backup feature on Server01	1	Evidence must show: <ul style="list-style-type: none"> Windows Server Backup feature has been installed correctly
Configure Windows Server Backup to run on agreed schedule	1	Evidence must show: <ul style="list-style-type: none"> Windows Server Backup feature has been configured to run hourly back-up
Confirm back-up has successfully completed	1	Evidence must show: <ul style="list-style-type: none"> back-up has been completed successfully
Confirm restore process works correctly	1 1	Evidence must show: <ul style="list-style-type: none"> files within KJeLearning folder have been deleted restore process is complete and files are present in KJeLearning folder

Step G Setting up and Testing Web Services

(4 marks)

Criteria	Marks	Guidance
Install Internet Information Services (IIS) service on Server02	1	Evidence must show: <ul style="list-style-type: none">IIS has been installed on Server02
Configure the IIS feature	1	Evidence must show: <ul style="list-style-type: none">IIS feature has been configured on Server02
Add DNS record for the web server	1	Evidence must show: <ul style="list-style-type: none">DNS record for www.kjelearning.com has been added with IP address of 192.168.1.2
Test website works on PC01	1	Evidence must show: <ul style="list-style-type: none">website opens correctly from PC01 client

Step H Remote Connection

(4 marks)

Criteria	Marks	Guidance
<p>Create a remote connection between PC02 and Server01 using Remote Desktop Connection.</p> <p>Note: You are not permitted to join the computer to the domain</p>	1	<p>Evidence must show:</p> <ul style="list-style-type: none"> attempted remote connection between PC02 and Server01 (192.168.1.1) – this step will likely fail
Successful remote connection between Server01 and PC02	1	<p>Evidence must show:</p> <ul style="list-style-type: none"> successful remote desktop connection to Server01 from PC02
Securing directory services accounts	1	<p>Evidence must show:</p> <ul style="list-style-type: none"> reset user Natalia Sobbah password and disable the account
Confirm user cannot log in to network devices	1	<p>Evidence must show:</p> <ul style="list-style-type: none"> user Natalia Sobbah cannot log on to PC01

Step I Configuring Group Policies

(3 marks)

Criteria	Marks	Guidance
Configure browser home page for all users to be www.kjelearning.com	1	Evidence must show: <ul style="list-style-type: none">• browser home page policy has been configured as required
Configure the Learner Share folder as a mapped drive for learners	1	Evidence must show: <ul style="list-style-type: none">• drive mapping policy configured to map Learner Share folder
Test and confirm configured policies	1	Evidence must show: <ul style="list-style-type: none">• PC01 has received the policies as configured

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

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