



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

LOCATION: COLEG SIR GÂR

LLEOLIAD: COLEG SIR GÂR

LEFEL 6

EXAMINATION PERIOD
MAY 2018

CYFNOD ARHOLIADAU
MAI 2018

WEDNESDAY, 9TH OF MAY 2018
11.30AM

DYDD MERCHER, 9^{FED} O FAI 2018
11.30YB

MODULE CODE: CSAC6002
WIDE AREA NETWORKS (PRACTICAL)

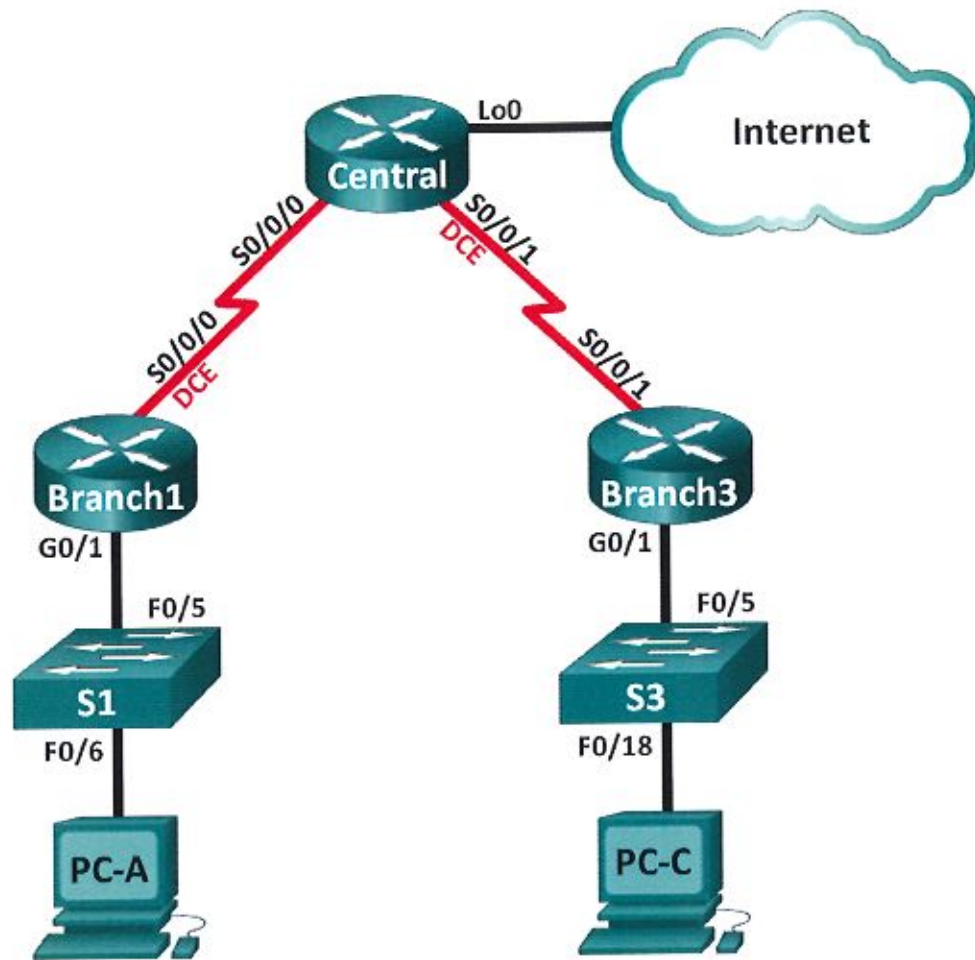
TIME: 2 HOURS

Name : DANIEL BOWDEN
Student ID : 162427
Date & Time : 09/05/2018

This is an individual practical lab-test, held under examination conditions. You will be assigned two Switches and three Routers; you should configure these devices based on the given specifications.

This paper is marked out of 90.

Topology



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
Branch1	G0/1	192.168.1.1	255.255.255.0	N/A
	S0/0/0 (DCE)	10.1.1.1	255.255.255.252	N/A
Central	S0/0/0	10.1.1.2	255.255.255.252	N/A
	S0/0/1 (DCE)	10.2.2.2	255.255.255.252	N/A
	Lo0	209.165.200.225	255.255.255.224	N/A
Branch3	G0/1	192.168.3.1	255.255.255.0	N/A
	S0/0/1	10.2.2.1	255.255.255.252	N/A
PC-A	NIC	192.168.1.3	255.255.255.0	192.168.1.1
PC-C	NIC	192.168.3.3	255.255.255.0	192.168.3.1

Task 1: Cable the network as shown in the topology.

(8 Marks)

Before proceeding, have your cabling verified by the examiner.

Instructor Sign-off: _____

Task 2: Configure basic settings for each router.

(25 Marks)

- a. Disable DNS lookup. ✓
- b. Configure the device name. ✓
- c. Encrypt plain text passwords. ✓
- d. Create a message of the day (MOTD) banner warning users that unauthorized access is prohibited. ✓
- e. Assign **class** as the encrypted privileged EXEC mode password. ✓
- f. Assign **cisco** as the console and vty password and enable login. ✓
- g. Set console logging to synchronous mode. ✓
- h. Apply the IP addresses to Serial and Gigabit Ethernet interfaces according to the Addressing Table and activate the physical interfaces. ✓
- i. Set the clock rate to **128000** for DCE serial interfaces. ✓
- j. Create **Loopback0** on the Central router to simulate access to the Internet and assign an IP address according to the Addressing Table. ✓
- k. Copy the running configuration to the startup configuration. ✓

Task 3: Configure routing.

(12 Marks)

- a. Enable single-area OSPF on the routers and use a process ID of 1. Add all the networks, except 209.165.200.224/27 into the OSPF process. ✓
- b. Configure a default route to the simulated Internet on the Central router using Lo0 as the exit interface and redistribute this route into the OSPF process. ✓

Task 4: Configure the PCs.

(6 Marks)

- a. Assign IP addresses and default gateways to the PCs according to the Addressing Table. ✓

Task 5: Change the serial encapsulation to PPP.

(10 Marks)

- a. Change the encapsulation on the serial interfaces, of each of the routers, from HDLC to PPP. ✓

Task 6: Configure PPP CHAP authentication for the link between the Central router and the Branch1 and Branch 3 routers.

- a. Configure the username for CHAP authentication and a password of **cisco**. ✓

(12 Marks)

Task 7: Verify Layer 3 connectivity.**(10 Marks)**

Routers	Result
PC-A to PC-C	✓
PC-A to Branch1	✓
PC-A to Central	✓
PC-A to Branch3	✓
PC-A to Internet	✓
PC-C to PC-A	✓
PC-C to Branch3	✓
PC-C to Central	✓
PC-C to Branch1	✓
PC-C to Internet	✓

Task 8:**(7 Marks)**

- a. Why is preferable to use PAP over CHAP?

Submission Requirement

On each device, issue the following commands and capture the configurations. Save the file as devicename surname Pno.txt.

```
show run
show ip protocols
show ip ospf neighbor
show ip route ospf
show ip ospf interface
```

All documentation for your solution should be submitted via USB.

It is your responsibility that you copy all the outputs and files correctly.



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11.30YB

MODULE CODE: CSAC6002
WIDE AREA NETWORKS (PRACTICAL)

TIME: 2 HOURS

Name

: Richard Stephens

Student ID

: 023872

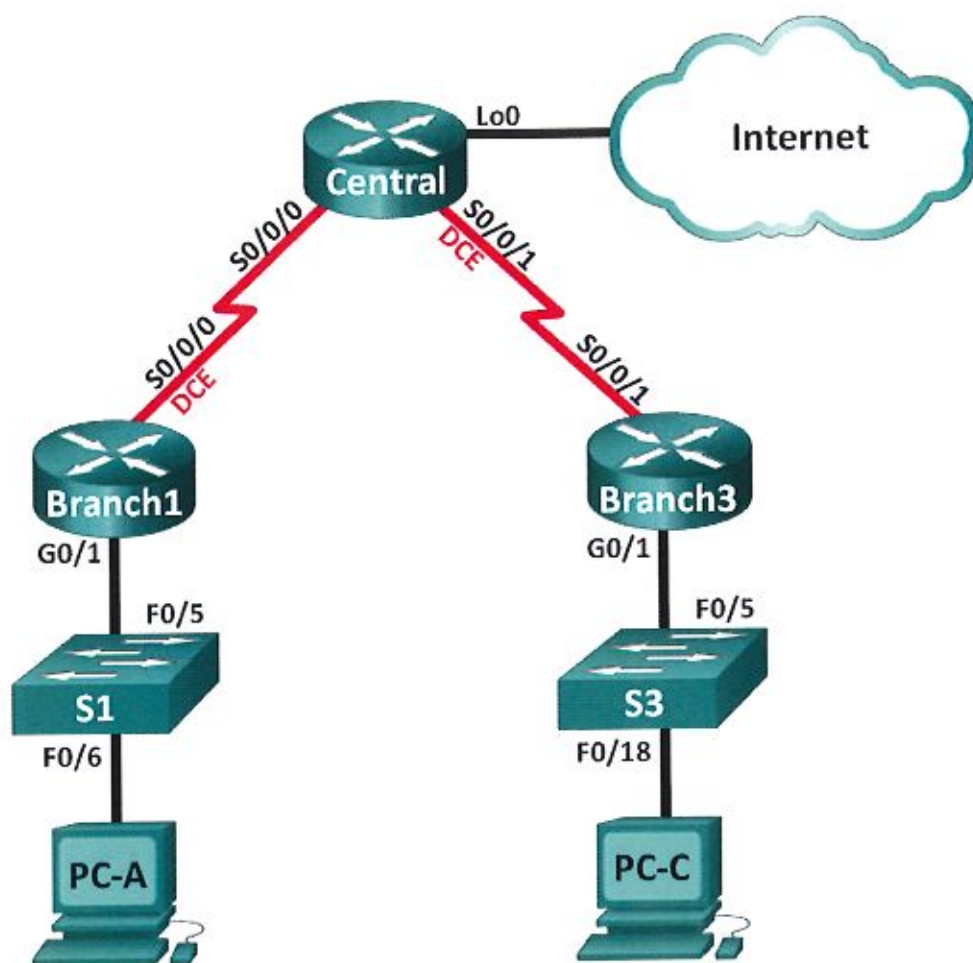
Date & Time

: 9-5-18 11-30

This is an individual practical lab-test, held under examination conditions. You will be assigned two Switches and three Routers; you should configure these devices based on the given specifications.

This paper is marked out of 90.

Topology



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
Branch1	G0/1	192.168.1.1	255.255.255.0	N/A
	S0/0/0 (DCE)	10.1.1.1	255.255.255.252	N/A
Central	S0/0/0	10.1.1.2	255.255.255.252	N/A
	S0/0/1 (DCE)	10.2.2.2	255.255.255.252	N/A
	Lo0	209.165.200.225	255.255.255.224	N/A
Branch3	G0/1	192.168.3.1	255.255.255.0	N/A
	S0/0/1	10.2.2.1	255.255.255.252	N/A
PC-A	NIC	192.168.1.3	255.255.255.0	192.168.1.1
PC-C	NIC	192.168.3.3	255.255.255.0	192.168.3.1

Task 1: Cable the network as shown in the topology.

(8 Marks)

Before proceeding, have your cabling verified by the examiner.

Instructor Sign-off: _____

Task 2: Configure basic settings for each router.

(25 Marks)

- a. Disable DNS lookup. ✓
- b. Configure the device name. ✓
- c. Encrypt plain text passwords. ✓
- d. Create a message of the day (MOTD) banner warning users that unauthorized access is prohibited. ✓
- e. Assign **class** as the encrypted privileged EXEC mode password. ✓
- f. Assign **cisco** as the console and vty password and enable login. ✓
- g. Set console logging to synchronous mode. ✓
- h. Apply the IP addresses to Serial and Gigabit Ethernet interfaces according to the Addressing Table and activate the physical interfaces. ✓
- i. Set the clock rate to **128000** for DCE serial interfaces. ✓
- j. Create **Loopback0** on the Central router to simulate access to the Internet and assign an IP address according to the Addressing Table. ✓
- k. Copy the running configuration to the startup configuration. ✓

Task 3: Configure routing.

(12 Marks)

- a. Enable single-area OSPF on the routers and use a process ID of 1. Add all the networks, except 209.165.200.224/27 into the OSPF process. ✓ 10
- b. Configure a default route to the simulated Internet on the Central router using Lo0 as the exit interface and redistribute this route into the OSPF process. ✓ 10

Task 4: Configure the PCs.

(6 Marks)

- a. Assign IP addresses and default gateways to the PCs according to the Addressing Table. ✓

Task 5: Change the serial encapsulation to PPP.

(10 Marks)

- a. Change the encapsulation on the serial interfaces, of each of the routers, from HDLC to PPP. ✓

Task 6: Configure PPP CHAP authentication for the link between the Central router and the Branch1 and Branch 3 routers.

- a. Configure the username for CHAP authentication and a password of **cisco**. ✓

(12 Marks)

Task 7: Verify Layer 3 connectivity.**(10 Marks)**

Routers	Result
PC-A to PC-C	/
PC-A to Branch1	/
PC-A to Central	/
PC-A to Branch3	/
PC-A to Internet	
PC-C to PC-A	/
PC-C to Branch3	/
PC-C to Central	/
PC-C to Branch1	/
PC-C to Internet	

Task 8:**(7 Marks)**

- a. Why is preferable to use PAP over CHAP?

Submission Requirement

On each device, issue the following commands and capture the configurations. Save the file as **devicename surname Pno.txt**.

show run
show ip protocols
show ip ospf neighbor
show ip route ospf
show ip ospf interface

All documentation for your solution should be submitted via USB.
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MODULE CODE: CSAC6002
WIDE AREA NETWORKS (PRACTICAL)

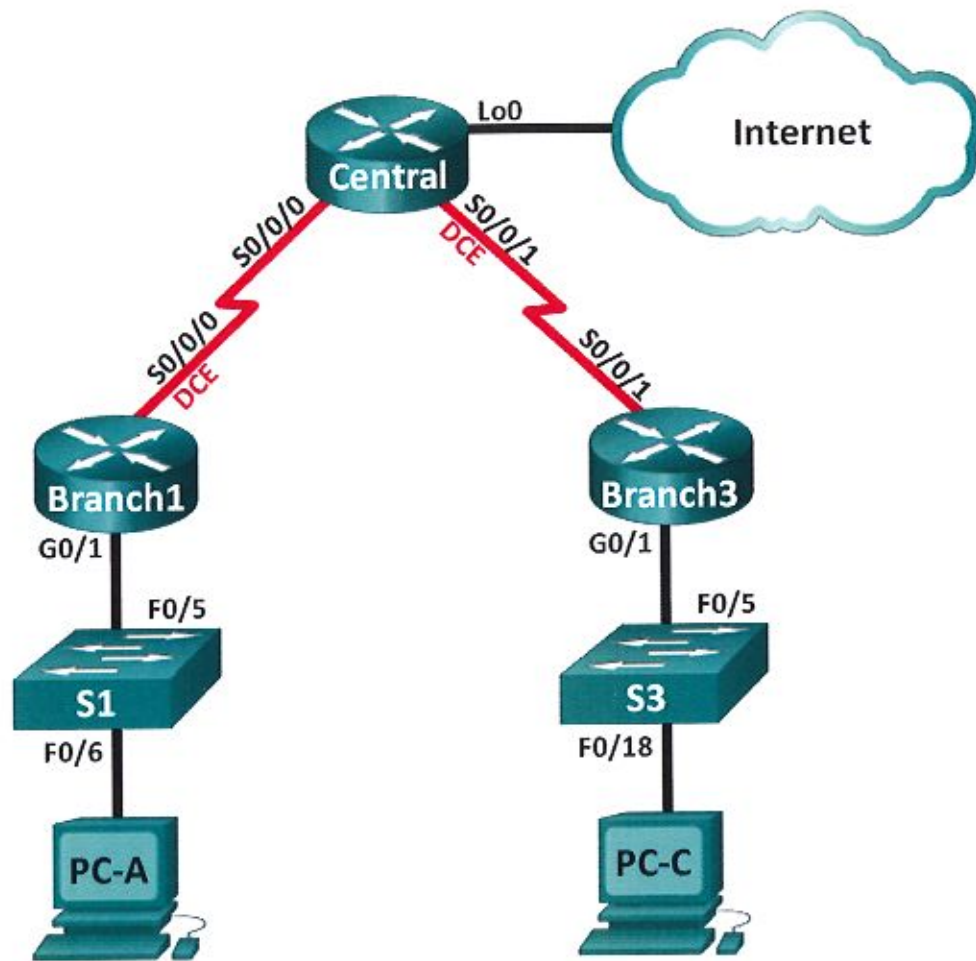
TIME: 2 HOURS

Name : LEWIS WELLS
Student ID : 090272
Date & Time : 09-05-2018 11:30-13:30

This is an individual practical lab-test, held under examination conditions. You will be assigned two Switches and three Routers; you should configure these devices based on the given specifications.

This paper is marked out of 90.

Topology



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
Branch1	G0/1	192.168.1.1	255.255.255.0	N/A
	S0/0/0 (DCE)	10.1.1.1	255.255.255.252	N/A
Central	S0/0/0	10.1.1.2	255.255.255.252	N/A
	S0/0/1 (DCE)	10.2.2.2	255.255.255.252	N/A
	Lo0	209.165.200.225	255.255.255.224	N/A
Branch3	G0/1	192.168.3.1	255.255.255.0	N/A
	S0/0/1	10.2.2.1	255.255.255.252	N/A
PC-A	NIC	192.168.1.3	255.255.255.0	192.168.1.1
PC-C	NIC	192.168.3.3	255.255.255.0	192.168.3.1

Task 1: Cable the network as shown in the topology.

(8 Marks)

Before proceeding, have your cabling verified by the examiner.

Instructor Sign-off: _____

Task 2: Configure basic settings for each router.

(25 Marks)

- a. Disable DNS lookup. ✓
- b. Configure the device name. ✓
- c. Encrypt plain text passwords. ✓
- d. Create a message of the day (MOTD) banner warning users that unauthorized access is prohibited.
- e. Assign **class** as the encrypted privileged EXEC mode password.
- f. Assign **cisco** as the console and vty password and enable login.
- g. Set console logging to synchronous mode.
- h. Apply the IP addresses to Serial and Gigabit Ethernet interfaces according to the Addressing Table and activate the physical interfaces.
- i. Set the clock rate to **128000** for DCE serial interfaces.
- j. Create **Loopback0** on the Central router to simulate access to the Internet and assign an IP address according to the Addressing Table.
- k. Copy the running configuration to the startup configuration.

Task 3: Configure routing.

(12 Marks)

- a. Enable single-area OSPF on the routers and use a process ID of 1. Add all the networks, except 209.165.200.224/27 into the OSPF process. ✓
- b. Configure a default route to the simulated Internet on the Central router using Lo0 as the exit interface and redistribute this route into the OSPF process.

Task 4: Configure the PCs.

(6 Marks)

- a. Assign IP addresses and default gateways to the PCs according to the Addressing Table. ✓

Task 5: Change the serial encapsulation to PPP.

(10 Marks)

- a. Change the encapsulation on the serial interfaces, of each of the routers, from HDLC to PPP. ✓

Task 6: Configure PPP CHAP authentication for the link between the Central router and the Branch1 and Branch 3 routers.

- a. Configure the username for CHAP authentication and a password of **cisco**.

(12 Marks)

Task 7: Verify Layer 3 connectivity.**(10 Marks)**

Routers	Result
PC-A to PC-C	✓
PC-A to Branch1	✓
PC-A to Central	✓
PC-A to Branch3	✓
PC-A to Internet	✓
PC-C to PC-A	✓
PC-C to Branch3	✓
PC-C to Central	✓
PC-C to Branch1	✓
PC-C to Internet	✓

Task 8:**(7 Marks)**

- a. Why is preferable to use PAP over CHAP?

Submission Requirement

On each device, issue the following commands and capture the configurations. Save the file as **devicename surname Pno.txt**.

show run
show ip protocols
show ip ospf neighbor
show ip route ospf
show ip ospf interface

All documentation for your solution should be submitted via USB.
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11.30AM

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MODULE CODE: CSAC6002
WIDE AREA NETWORKS (PRACTICAL)

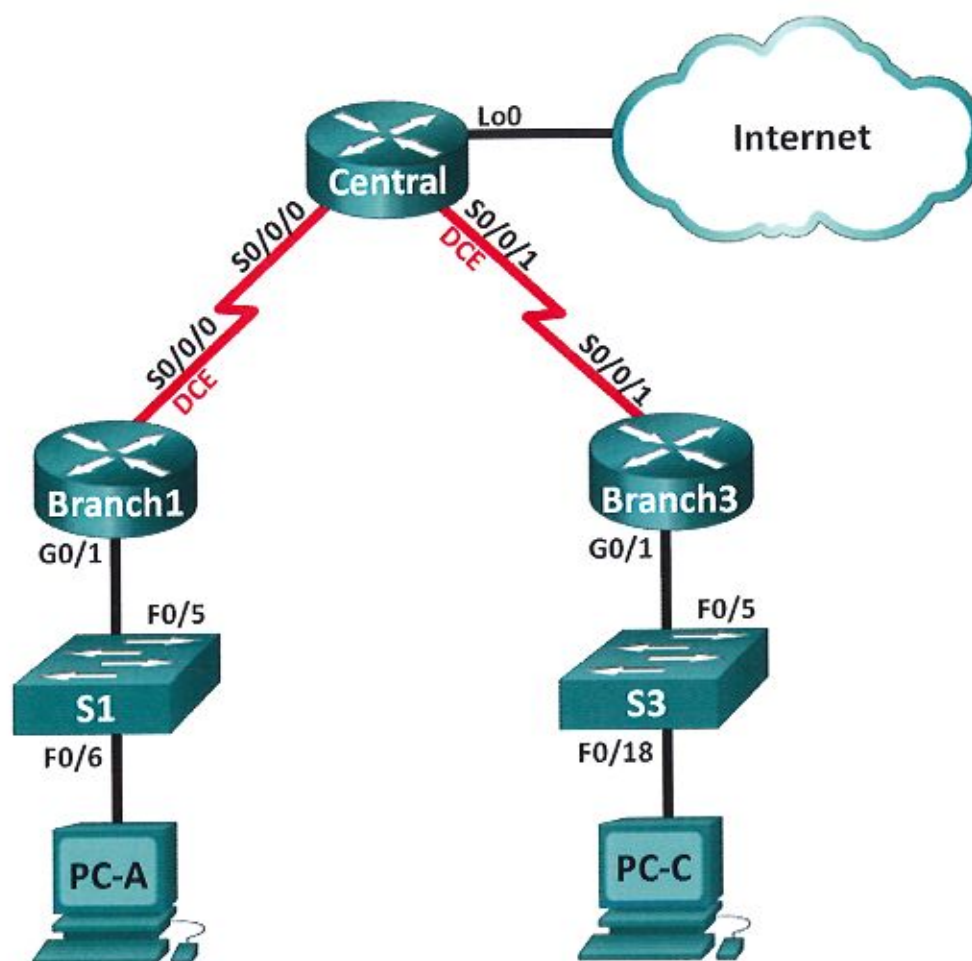
TIME: 2 HOURS

Name : RICHARD DAVIES
Student ID : 067478
Date & Time : 11:30

This is an individual practical lab-test, held under examination conditions. You will be assigned two Switches and three Routers; you should configure these devices based on the given specifications.

This paper is marked out of 90.

Topology



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
Branch1	G0/1	192.168.1.1	255.255.255.0	N/A
	S0/0/0 (DCE)	10.1.1.1	255.255.255.252	N/A
Central	S0/0/0	10.1.1.2	255.255.255.252	N/A
	S0/0/1 (DCE)	10.2.2.2	255.255.255.252	N/A
	Lo0	209.165.200.225	255.255.255.224	N/A
Branch3	G0/1	192.168.3.1	255.255.255.0	N/A
	S0/0/1	10.2.2.1	255.255.255.252	N/A
PC-A	NIC	192.168.1.3	255.255.255.0	192.168.1.1
PC-C	NIC	192.168.3.3	255.255.255.0	192.168.3.1

chip was put.

Task 1: Cable the network as shown in the topology.

(8 Marks)

Before proceeding, have your cabling verified by the examiner.

Instructor Sign-off: _____

Task 2: Configure basic settings for each router.

(25 Marks)

- a. Disable DNS lookup. ✓
- b. Configure the device name. ✓
- c. Encrypt plain text passwords. ✓
- d. Create a message of the day (MOTD) banner warning users that unauthorized access is prohibited. ✓
- e. Assign **class** as the encrypted privileged EXEC mode password. ✓
- f. Assign **cisco** as the console and vty password and enable login. ✓
- g. Set console logging to synchronous mode. ✓
- h. Apply the IP addresses to Serial and Gigabit Ethernet interfaces according to the Addressing Table and activate the physical interfaces. ✓
- i. Set the clock rate to **128000** for DCE serial interfaces. ✓
- j. Create **Loopback0** on the Central router to simulate access to the Internet and assign an IP address according to the Addressing Table. ✓
- k. Copy the running configuration to the startup configuration. ✓

Task 3: Configure routing.

(12 Marks)

- a. Enable single-area OSPF on the routers and use a process ID of 1. Add all the networks, except 209.165.200.224/27 into the OSPF process. *No Area 0* ✓
- b. Configure a default route to the simulated Internet on the Central router using Lo0 as the exit interface and redistribute this route into the OSPF process. ✓

Task 4: Configure the PCs.

(6 Marks)

- a. Assign IP addresses and default gateways to the PCs according to the Addressing Table. ✓

Task 5: Change the serial encapsulation to PPP.

(10 Marks)

- a. Change the encapsulation on the serial interfaces, of each of the routers, from HDLC to PPP. ✓

Task 6: Configure PPP CHAP authentication for the link between the Central router and the Branch1 and Branch 3 routers.

- a. Configure the username for CHAP authentication and a password of **cisco**. ✓

(12 Marks)

10

10 ✓

Task 7: Verify Layer 3 connectivity.

(10 Marks)

8 ✓

Routers	Result
PC-A to PC-C	~~Successful~~ Successful
PC-A to Branch1	~~Success~~ Successful
PC-A to Central	Successful
PC-A to Branch3	Successful
PC-A to Internet	
PC-C to PC-A	Successful
PC-C to Branch3	Successful
PC-C to Central	Successful
PC-C to Branch1	Successful
PC-C to Internet	

Task 8:

(7 Marks)

- a. Why is preferable to use PAP over CHAP?

5 ✓

Submission Requirement

On each device, issue the following commands and capture the configurations. Save the file as devicename surname Pno.txt.

show run
show ip protocols
show ip ospf neighbor
show ip route ospf
show ip ospf interface

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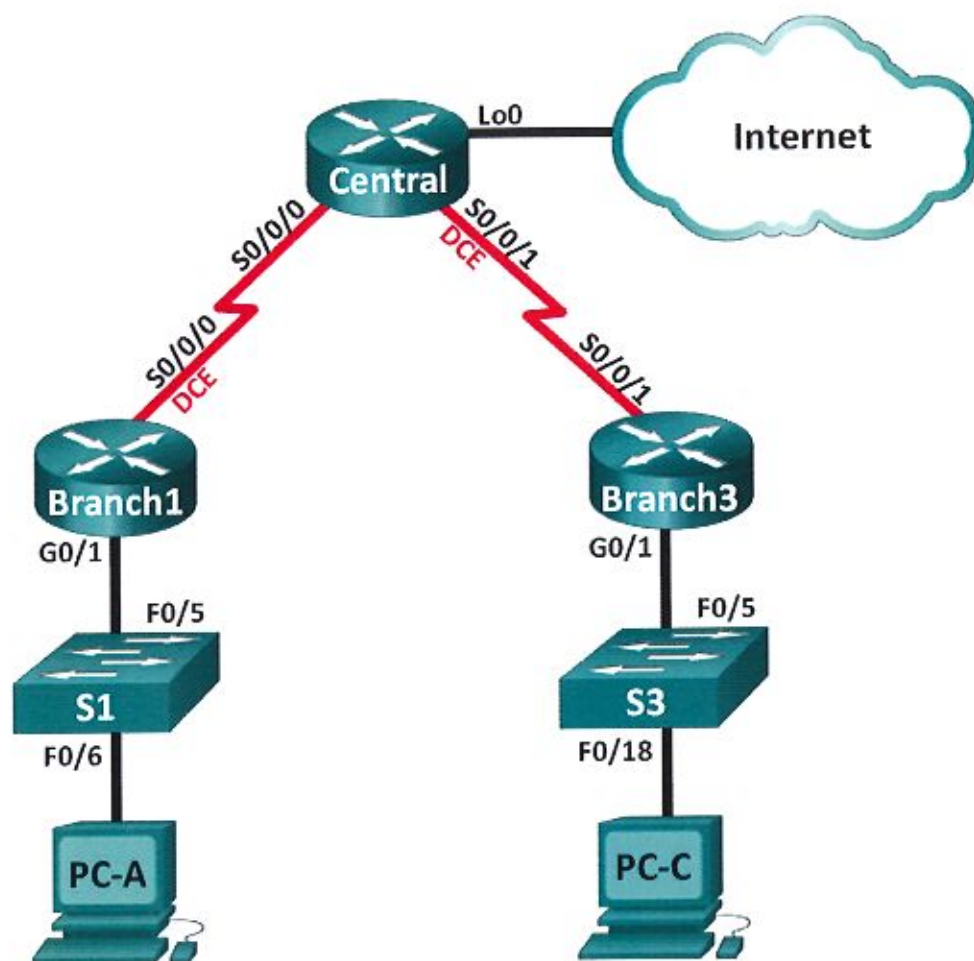
TIME: 2 HOURS

Name : Michael Bonnell
Student ID : 171321
Date & Time : 09/05/2018 11:30

This is an individual practical lab-test, held under examination conditions. You will be assigned two Switches and three Routers; you should configure these devices based on the given specifications.

This paper is marked out of 90.

Topology



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
Branch1	G0/1	192.168.1.1	255.255.255.0	N/A
	S0/0/0 (DCE)	10.1.1.1	255.255.255.252	N/A
Central	S0/0/0	10.1.1.2	255.255.255.252	N/A
	S0/0/1 (DCE)	10.2.2.2	255.255.255.252	N/A
	Lo0	209.165.200.225	255.255.255.224	N/A
Branch3	G0/1	192.168.3.1	255.255.255.0	N/A
	S0/0/1	10.2.2.1	255.255.255.252	N/A
PC-A	NIC	192.168.1.3	255.255.255.0	192.168.1.1
PC-C	NIC	192.168.3.3	255.255.255.0	192.168.3.1

Task 1: Cable the network as shown in the topology.

(8 Marks)

Before proceeding, have your cabling verified by the examiner.

Instructor Sign-off: _____

Task 2: Configure basic settings for each router.

(25 Marks)

- a. Disable DNS lookup. ✓
- b. Configure the device name. ✓
- c. Encrypt plain text passwords. ✓
- d. Create a message of the day (MOTD) banner warning users that unauthorized access is prohibited. ✓
- e. Assign **class** as the encrypted privileged EXEC mode password. ✓
- f. Assign **cisco** as the console and vty password and enable login. ✓
- g. Set console logging to synchronous mode. ✓
- h. Apply the IP addresses to Serial and Gigabit Ethernet interfaces according to the Addressing Table and activate the physical interfaces. ✓
- i. Set the clock rate to **128000** for DCE serial interfaces. ✓
- j. Create **Loopback0** on the Central router to simulate access to the Internet and assign an IP address according to the Addressing Table. ✓
- k. Copy the running configuration to the startup configuration. ✓

Task 3: Configure routing.

(12 Marks)

- a. Enable single-area OSPF on the routers and use a process ID of 1. Add all the networks, except 209.165.200.224/27 into the OSPF process. ✓
- b. Configure a default route to the simulated Internet on the Central router using Lo0 as the exit interface and redistribute this route into the OSPF process. ✓

Task 4: Configure the PCs.

(6 Marks)

- a. Assign IP addresses and default gateways to the PCs according to the Addressing Table. ✓

Task 5: Change the serial encapsulation to PPP.

(10 Marks)

- a. Change the encapsulation on the serial interfaces, of each of the routers, from HDLC to PPP. ✓

Task 6: Configure PPP CHAP authentication for the link between the Central router and the Branch1 and Branch 3 routers.

- a. Configure the username for CHAP authentication and a password of **cisco**. ✓

(12 Marks)

Task 7: Verify Layer 3 connectivity.**(10 Marks)**

Routers	Result
PC-A to PC-C	✓
PC-A to Branch1	✓
PC-A to Central	✓
PC-A to Branch3	✓
PC-A to Internet	✓
PC-C to PC-A	✓
PC-C to Branch3	✓
PC-C to Central	✓
PC-C to Branch1	✓
PC-C to Internet	✓

Task 8:**(7 Marks)**

- a. Why is preferable to use PAP over CHAP?

5

S ✓

Submission Requirement

On each device, issue the following commands and capture the configurations. Save the file as **devicename surname Pno.txt**.

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show ip route ospf
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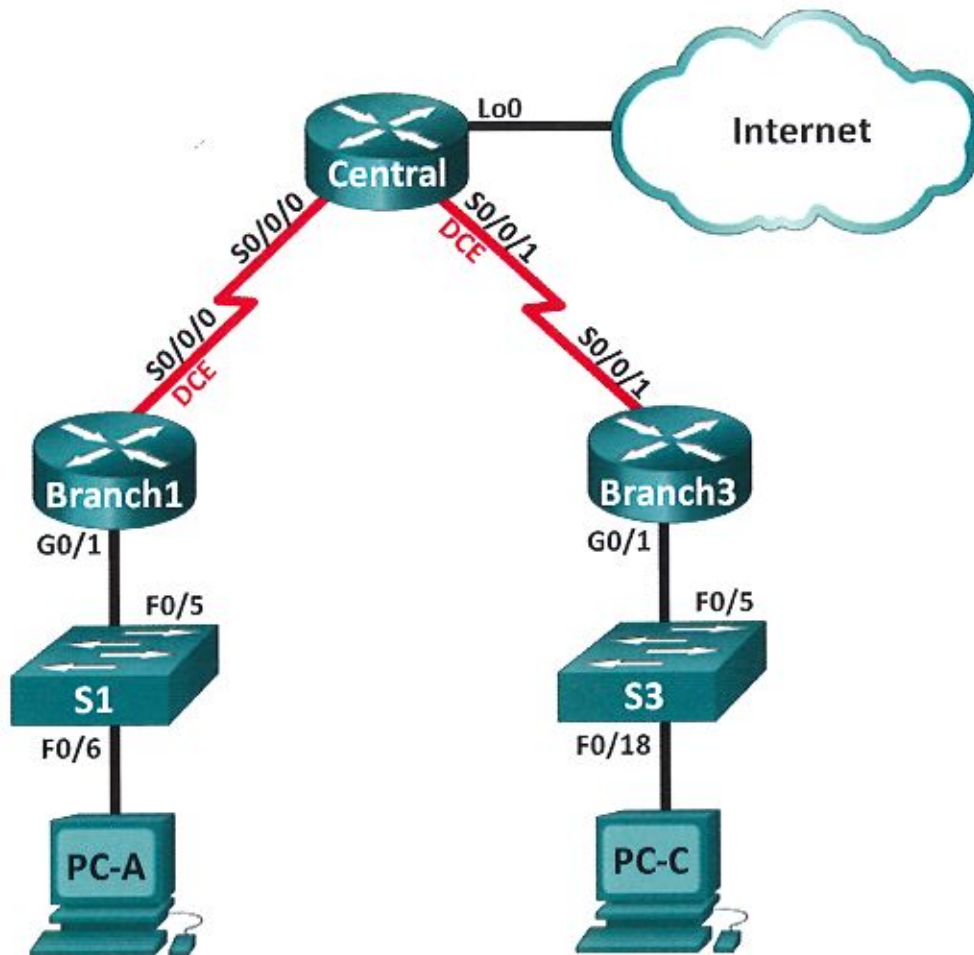
TIME: 2 HOURS

Name : Kyle Jenkins
Student ID : 179263
Date & Time : 09/05/2018 11:32

This is an individual practical lab-test, held under examination conditions. You will be assigned two Switches and three Routers; you should configure these devices based on the given specifications.

This paper is marked out of 90.

Topology



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
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	S0/0/1 (DCE)	10.2.2.2	255.255.255.252	N/A
	Lo0	209.165.200.225	255.255.255.224	N/A
Branch3	G0/1	192.168.3.1	255.255.255.0	N/A
	S0/0/1	10.2.2.1	255.255.255.252	N/A
PC-A	NIC	192.168.1.3	255.255.255.0	192.168.1.1
PC-C	NIC	192.168.3.3	255.255.255.0	192.168.3.1

Task 1: Cable the network as shown in the topology.

(8 Marks)

Before proceeding, have your cabling verified by the examiner.

Instructor Sign-off: _____

Task 2: Configure basic settings for each router.

(25 Marks)

- a. Disable DNS lookup. ✓✓
- b. Configure the device name. ✓✓
- c. Encrypt plain text passwords. ✓✓
- d. Create a message of the day (MOTD) banner warning users that unauthorized access is prohibited. ✓✓
- e. Assign **class** as the encrypted privileged EXEC mode password. ✓✓
- f. Assign **cisco** as the console and vty password and enable login. ✓✓
- g. Set console logging to synchronous mode. ✓✓
- h. Apply the IP addresses to Serial and Gigabit Ethernet interfaces according to the Addressing Table and activate the physical interfaces. ✓✓
- i. Set the clock rate to **128000** for DCE serial interfaces. ✓
- j. Create **Loopback0** on the Central router to simulate access to the Internet and assign an IP address according to the Addressing Table. ✓✓
- k. Copy the running configuration to the startup configuration. ✓

Task 3: Configure routing.

(12 Marks)

- a. Enable single-area OSPF on the routers and use a process ID of 1. Add all the networks, except 209.165.200.224/27 into the OSPF process. ✓✓
- b. Configure a default route to the simulated Internet on the Central router using Lo0 as the exit interface and redistribute this route into the OSPF process. ✓✓

Task 4: Configure the PCs.

(6 Marks)

- a. Assign IP addresses and default gateways to the PCs according to the Addressing Table. ✓✓

Task 5: Change the serial encapsulation to PPP.

(10 Marks)

- a. Change the encapsulation on the serial interfaces, of each of the routers, from HDLC to PPP. ✓✓

Task 6: Configure PPP CHAP authentication for the link between the Central router and the Branch1 and Branch 3 routers.

- a. Configure the username for CHAP authentication and a password of **cisco**. ✓✓

(12 Marks)

Task 7: Verify Layer 3 connectivity.**(10 Marks)**

Routers	Result
PC-A to PC-C	✓
PC-A to Branch1	✓
PC-A to Central	✓
PC-A to Branch3	✓
PC-A to Internet	✓
PC-C to PC-A	✓
PC-C to Branch3	✓
PC-C to Central	✓
PC-C to Branch1	✓
PC-C to Internet	✓

Task 8:**(7 Marks)**

- a. Why is preferable to use PAP over CHAP?

Submission Requirement

On each device, issue the following commands and capture the configurations. Save the file as devicename surname Pno.txt.

show run
show ip protocols
show ip ospf neighbor
show ip route ospf
show ip ospf interface

All documentation for your solution should be submitted via USB.
It is your responsibility that you copy all the outputs and files correctly.



Prifysgol Cymru
Y Drindod Dewi Sant
University of Wales
Trinity Saint David

LOCATION: COLEG SIR GÂR

LLEOLIAD: COLEG SIR GÂR

LEFEL 6

EXAMINATION PERIOD
MAY 2018

CYFNOD ARHOLIADAU
MAI 2018

WEDNESDAY, 9TH OF MAY 2018
11.30AM

DYDD MERCHER, 9^{FED} O FAI 2018
11.30YB

MODULE CODE: CSAC6002
WIDE AREA NETWORKS (PRACTICAL)

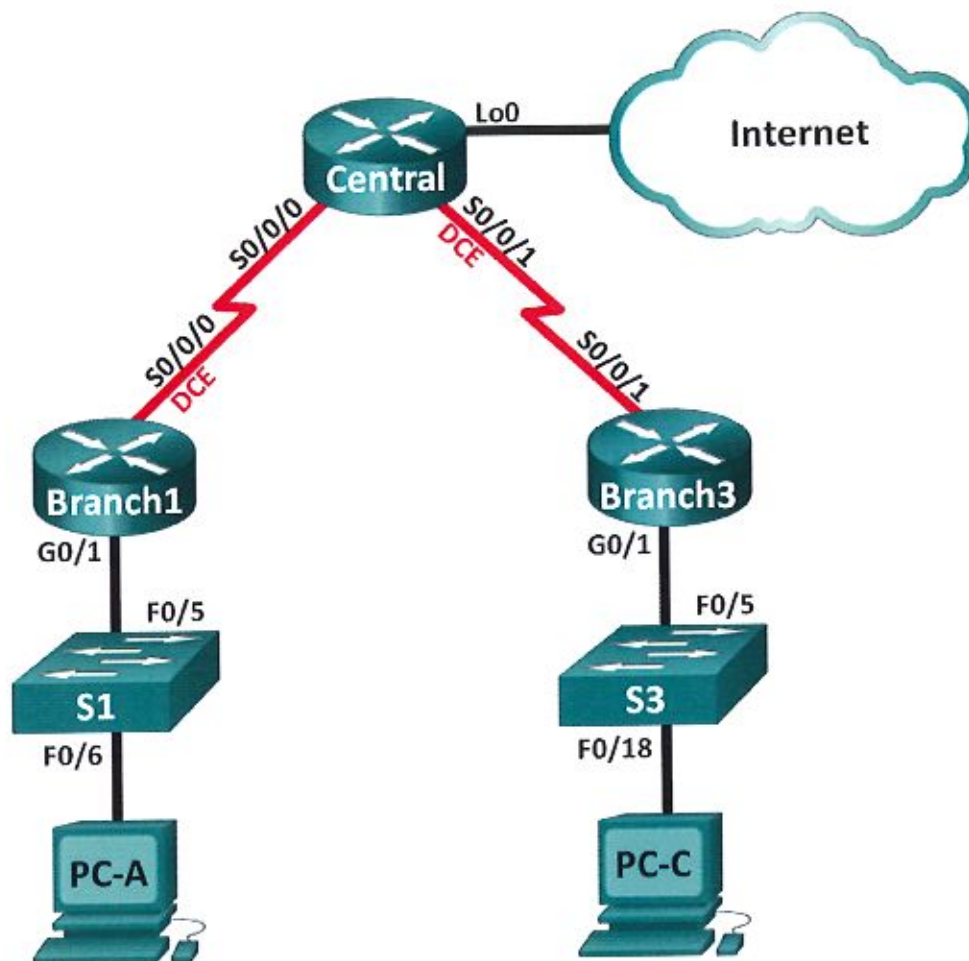
TIME: 2 HOURS

Name : Oliver Bryan Jones
Student ID : 1503244
Date & Time : 9/5/18 11.30 - 1.30

This is an individual practical lab-test, held under examination conditions. You will be assigned two Switches and three Routers; you should configure these devices based on the given specifications.

This paper is marked out of 90.

Topology



Addressing Table

Device	Interface	IP Address	Subnet Mask	Default Gateway
Branch1	G0/1	192.168.1.1	255.255.255.0	N/A
	S0/0/0 (DCE)	10.1.1.1	255.255.255.252	N/A
Central	S0/0/0	10.1.1.2	255.255.255.252	N/A
	S0/0/1 (DCE)	10.2.2.2	255.255.255.252	N/A
	Lo0	209.165.200.225	255.255.255.224	N/A
Branch3	G0/1	192.168.3.1	255.255.255.0	N/A
	S0/0/1	10.2.2.1	255.255.255.252	N/A
PC-A	NIC	192.168.1.3	255.255.255.0	192.168.1.1
PC-C	NIC	192.168.3.3	255.255.255.0	192.168.3.1

0.0.0.255

0.0.0.3.

0.0.0.3

0.0.0.3

0.0.0.255

0.0.0.3.

Task 1: Cable the network as shown in the topology.

(8 Marks)

Before proceeding, have your cabling verified by the examiner.

Instructor Sign-off: _____

CROSS OVER (MDIX)

4

4 ✓

Task 2: Configure basic settings for each router.

(25 Marks)

- a. Disable DNS lookup. ✓✓✓ 2/3
- b. Configure the device name. ✓✓✓
- c. Encrypt plain text passwords. ✓✓✓
- d. Create a message of the day (MOTD) banner warning users that unauthorized access is prohibited. ✓✓✓
- e. Assign **class** as the encrypted privileged EXEC mode password. ✓✓✓
- f. Assign **cisco** as the console and vty password and enable login. ✓✓✓
- g. Set console logging to synchronous mode. ✓✓✓
- h. Apply the IP addresses to Serial and Gigabit Ethernet interfaces according to the Addressing Table and activate the physical interfaces. ✓✓✓
- i. Set the clock rate to **128000** for DCE serial interfaces. ✓✓ 1/2
- j. Create **Loopback0** on the Central router to simulate access to the Internet and assign an IP address according to the Addressing Table. ✓✓✓
- k. Copy the running configuration to the startup configuration. ✓✓✓ 2/3

Task 3: Configure routing.

(12 Marks)

- a. Enable single-area OSPF on the routers and use a process ID of 1. Add all the networks, except 209.165.200.224/27 into the OSPF process. ✓✓✓
- b. Configure a default route to the simulated Internet on the Central router using Lo0 as the exit interface and redistribute this route into the OSPF process. X 8

Task 4: Configure the PCs.

(6 Marks)

- a. Assign IP addresses and default gateways to the PCs according to the Addressing Table. ✓✓✓

Task 5: Change the serial encapsulation to PPP.

(10 Marks)

- a. Change the encapsulation on the serial interfaces, of each of the routers, from HDLC to PPP. ✓✓✓

Task 6: Configure PPP CHAP authentication for the link between the Central router and the Branch1 and Branch 3 routers.

- a. Configure the username for CHAP authentication and a password of **cisco**. X

(12 Marks)

Task 7: Verify Layer 3 connectivity.**(10 Marks)**

Routers	Result
PC-A to PC-C	Successful
PC-A to Branch1	Successful
PC-A to Central	Successful
PC-A to Branch3	Successful
PC-A to Internet	Unsuccessful
PC-C to PC-A	Successful
PC-C to Branch3	Successful
PC-C to Central	Successful
PC-C to Branch1	Successful
PC-C to Internet	Unsuccessful

Task 8:**(7 Marks)**

- a. Why is preferable to use PAP over CHAP?

Submission Requirement

On each device, issue the following commands and capture the configurations. Save the file as **devicename surname Pno.txt**.

show run
show ip protocols
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