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University of Wales
Trinity Saint David

BSc Cloud Computing
Local Area Networks (ACCC5002_LON)
FEBRUARY 2020 TERM
Practical Exam (Revised for Assignment Assessment)

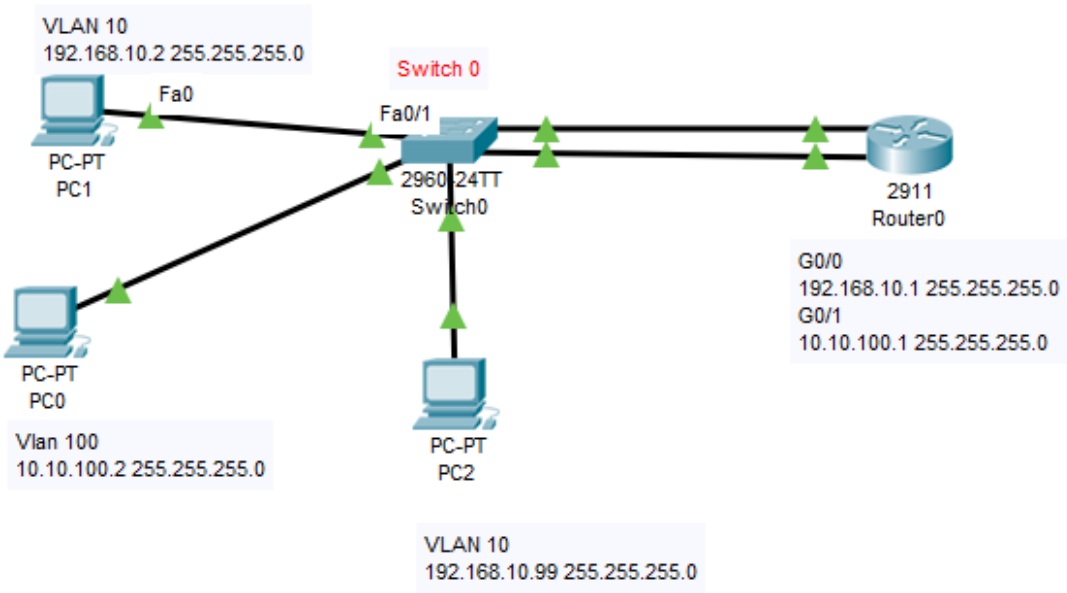
Student Name : _____
Student ID : _____
Date : _____

This is an individual practical lab-test, held under examination conditions. You will need configure a Packet Tracer network.

Your network should be configure using these devices based on the following specifications.
This paper is marked out of 100.

You will have fixed time period to complete this task and then upload it to Moodle.

TOPOLOGY DIAGRAM



Task 1: Network Connection (15 Marks)

Configure the network with Packet Tracer using a 2960 switch, a Cisco 2911 router and 3 PCs. Following the diagram above

Create 6 files, a Word or text file for the PCs, a text file for the switch and a text file for the router. The file names should be of the format:

Task2_PCs_Your-name_ID-number.docx

Task2_SWITCH_Your-name_ID-number.docx

Task2_ROUTER_Your-name_ID-number.docx

Task3_PCs_Your-name_ID-number.docx

Task3_SWITCH_Your-name_ID-number.docx

Task3_ROUTER_Your-name_ID-number.docx

(e.g. Task2*_SWITCH_Paul_Wallin_123456.docx)*

Task 2: Configure the Router and the Switch

1. Configure the 3 PCs with the IP addresses shown in the diagram above and the default gateway address set to the appropriate router Ethernet port interface. For each PC using the Command Prompt from the Desktop, take screenshots of the "ipconfig" command showing the outputs of the commands. Paste the output of each PC into the file "Task2_PCs_Your-name_ID-number.docx". **(5 marks)**

2. Connect the cables from the PCs to the switch. Connect cables from the router Ethernet ports to the switch as shown in the diagram. The ports used are not specified you may choose which ports to use.

3. For PC0 and PC1 ping PC2 using the Command Prompt from the Desktop, take screenshots of the "ping" command showing the outputs of the command. Paste the output of PC0 and PC1 into the file "Task3_PCs_Your-name_ID-number.docx". (**5 marks**)

4. Copy and paste the configuration of Switch 0, using the "show running-configuration" command to the file: Task2_SWITCH_Your-name_ID-number.docx **(5 marks**)

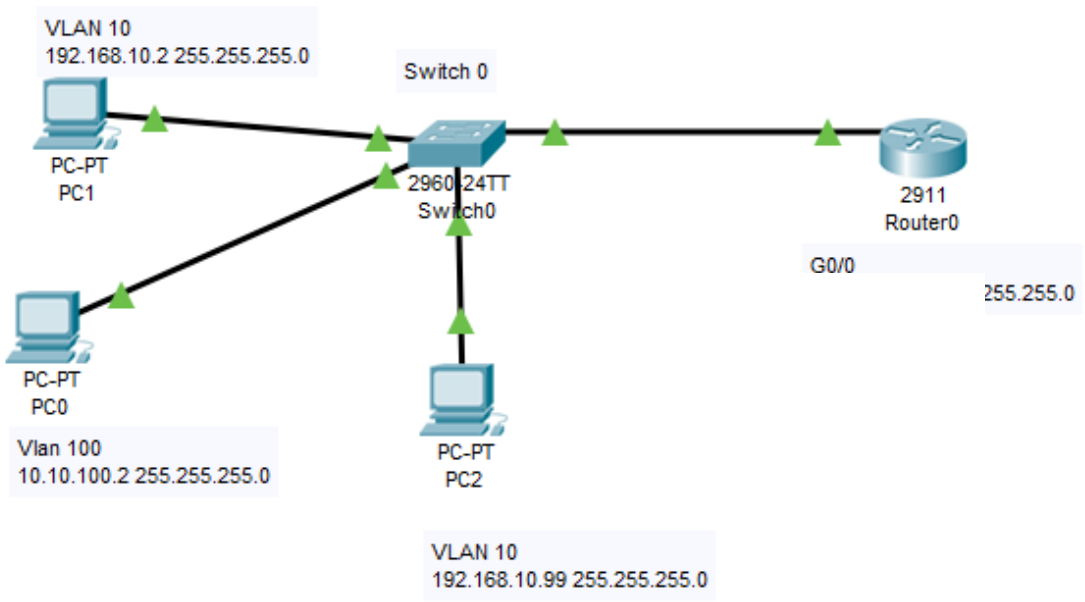
5. Copy and paste the configuration of Router 0, using the "show running-configuration" command to the file: Task2_Router_Your-name_ID-number.docx **(5 marks)**

6. Copy and paste the interface information of Router 0, using the "show ip interface brief" command to the file: Task2_Router_Your-name_ID-number.docx **(5 marks)**

7. **Save the Packet Tracer file as:**

   TASK2(Your-name_ID-number).pka

Task 3: Configure the Switch and Router



1 Change the cabling so that there is only one cable linking to the router to the switch
2 Create 2 subinterfaces on the router Ethernet interface. (**5 marks**)
3 Ensure that one subinterface is assigned to VLAN 10 and the other one subinterface is assigned to VLAN 100 (**5 marks**)
4 Create a trunk interface on the switch on the Ethernet interface connecting the switch to the router (**5 marks**)
5 Add each switch interface connected to PC0, PC1 and PC2 to appropriate VLAN (**5 marks**)
6 Ping PC0 to PC1 using the Command Prompt from the Desktop **(Packet Tracer)**, take screenshots of the "ping" command showing the outputs of the command. Paste the output of PC0 and PC1 into the file "Task3_PCs_Your-name_ID-number.docx". (**5 marks**):

7 Ping PC0 to PC2 using the Command Prompt from the Desktop **(Packet Tracer)**, take screenshots of the "ping" command showing the outputs of the command. Paste the output of PC0 and PC1 into the file "Task3_PCs_Your-name_ID-number.docx". (**5 marks**):

8. Copy and paste the configuration of Switch 0, using the "show running-configuration" command to the file: Task2_SWITCH_Your-name_ID-number.docx **(5 marks)**

9. Copy and paste the interface information of "show ip interface brief" to the file: Task2_Switch_Your-name_ID-number.docx **(5 marks)**

10. Copy and paste the information of "show vlan brief" command to the file: Task2_Switch_Your-name_ID-number.docx **(5 marks)**

11. Copy and paste the information of "show interface trunk" command to the file: Task2_Switch_Your-name_ID-number.docx **(5 marks)**

12. Copy and paste the configuration of Router 0, using the "show running-configuration" command to the file: Task2_Router_Your-name_ID-number.docx **(5 marks)**

13. Copy and paste the interface information of Router 0, using the “show ip interface brief” command to the file: Task2_Router_Your-name_ID-number.docx for the router below **(5 marks)**

14. Save the Packet Tracer file as:

TASK3(Your-name_ID-number).pka

Submission Requirement

All documentation for your solution and the Packet Tracer file should be submitted as a single zip file via Moodle.