

**School of Engineering**

Diploma in Infocomm & Media Engineering

EGL209 - Network Technology

Packet Tracer Project

Individual effort

Weightage: 20%

Submission to Bright Space: week 18, Friday

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Set: \_\_\_\_\_\_\_\_SET-B\_\_\_\_\_\_\_\_\_\_

Instructions:

1. Change the user profile in the Packet Tracer File to your name.
2. Complete all the configuration as instructed in the packet tracer file.
3. Rename this answer document to yourNameAdminNo.docx, e.g. Rosman219876B.docx, ChngSuatHoon211234A.docx, Jayachandran216574C.docx
4. You need to provide text answers or screenshot answers based on the tasks questions asked.
5. In Bright Space, look for your group to submit your word document & completed Packet Tracer File to **Project Submission**.
6. There is no Time Limit for this exercise

The Scenario:  
You are to set up, configure the entire network and then connect to the ISP Network with the information given below.

**Part 1: Configure IPv4 Address and Other Details Manually** (20 marks)

Verify the configuration by screen capture with the command: “show ip interface brief” on R1, R2 and R3:

R1 :

Text

Description automatically generated with medium confidence

R2 :

Text

Description automatically generated with medium confidence

R3 :

Text

Description automatically generated

**Part 2: Configure LAN 2 - VLANs and Sub-interfaces** (8 marks)

Verify the above configuration by screen capture with the command: “show vlan brief” on SW2:

Table

Description automatically generated

**Part 3: Configure OSPF Routing Protocol** (10 marks)

Verify the above configuration by screen capture with the command: “show ip ospf neighbor” on R1, R2 & R3:

R1 :

Text

Description automatically generated

R2 :

Text

Description automatically generated

R3 :

Text

Description automatically generated

**Part 4: Configure Default Routing** (4 marks)

Verify the above configuration by screen capture with the command: “show ip route” on R1, R2 & R3:

R1 :

Text

Description automatically generated

R2 :

Text

Description automatically generated

R3 :

Text

Description automatically generated

**Part 5: Configure Network Services** (4 marks)

Verify the above configuration by screen capture on the DNS server:

Graphical user interface, application

Description automatically generated

**Part 6: Configure IPv6 Address and Other Details Manually** (10 marks)

6a. Verify the above configuration by screen capture with the command: “show ipv6 interface brief” on R1, R2 & R3:

R1 :

Graphical user interface, text, application

Description automatically generated

R2 :

Graphical user interface, text, application

Description automatically generated

R3 :

Graphical user interface, text, application

Description automatically generated

6b. Verify the configuration by screen capture with the command: “show ipv6 route” on R1:

Text, letter

Description automatically generated

6c.Verify the configuration by screen capture with the command: “show ipv6 route” on R2:

**Text

Description automatically generated**

**Part 7: Configure Network Address Translation** (10 marks)

Verify the configuration with the command: “show run” on R3 and screen capture the section on NAT configuration:

Text

Description automatically generated

Verify the NAT operation by screen capture with the command: “show ip nat translation” on R3:

Text

Description automatically generated

**Part 8: Configure Port forwarding** (4 marks)

Verify the configuration by screen capture with the command: “show ip nat translation” on R3:

**Text

Description automatically generated**

**Part 9: Testing within Company** (10 marks)

Verify the 4 tests with corresponding screen captures.

Open webpage [www.brazil.com](http://www.brazil.com) from Alex :

Graphical user interface, application, table, Excel

Description automatically generated

Ping Alex from Cara’s PC :

**Graphical user interface, text

Description automatically generated**

Send test email from Belle to Cara :

Graphical user interface, text, application

Description automatically generated

Send test email from Alex to Danny :

Graphical user interface, text, application

Description automatically generated

**Part 10: Connect the Company to the Server** (10 marks)

Verify the ISP connectivity with a screen capture as follows (remove the sample screen)

**Diagram

Description automatically generated**

**Part 11: Testing between Company and ISP** (10 marks)

Verify the 5 tests with corresponding screen captures.

Open ISP webpage [www.isp2744.com](http://www.isp2744.com) from Danny :

Graphical user interface, text, application, email

Description automatically generated

Send a test email from Cara to [support@isp2744.com](mailto:support@isp2744.com) :

Graphical user interface, text, application

Description automatically generated

Ping [sales@isp2744.com](mailto:sales@isp2744.com) from Danny’s PC :

Graphical user interface, text

Description automatically generated

Ping [support@isp2744.com](mailto:support@isp2744.com) from [sales@isp2744.com](mailto:sales@isp2744.com) :

Graphical user interface, text

Description automatically generated