

LOCATION: SWANSEA

LLEOLIAD: ABERTAWE

LEVEL 6

LEFEL 6

EXAMINATION PERIOD
JULY 2016

CYFNOD ARHOLIADAU
GORFFENNAF 2016

MODULE CODE: M3X8644
Network Management

TIME: 2 HOURS

ANSWER THREE QUESTION OUT OF FOUR

Equipment or materials required – None

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ANSWER THREE QUESTIONS

1. First Exam Question

(a) In reference to Network Management::

- i. The International Organization Standards (ISO) divided it into five functional areas, name and discuss them.

(20 Marks)

- ii. Network Management platform is a software package, state some basic features that are included in it.

(5 Marks)

2. Second Exam Question

(a) Generic Routing Encapsulation (GRE) is a layer 3 tunnel for VPN:

- i. State the characteristics for it.

(5 Marks)

- ii. You are required to configure figure 1 below for a network you are monitoring. Write the GRE configuration for **R1**.

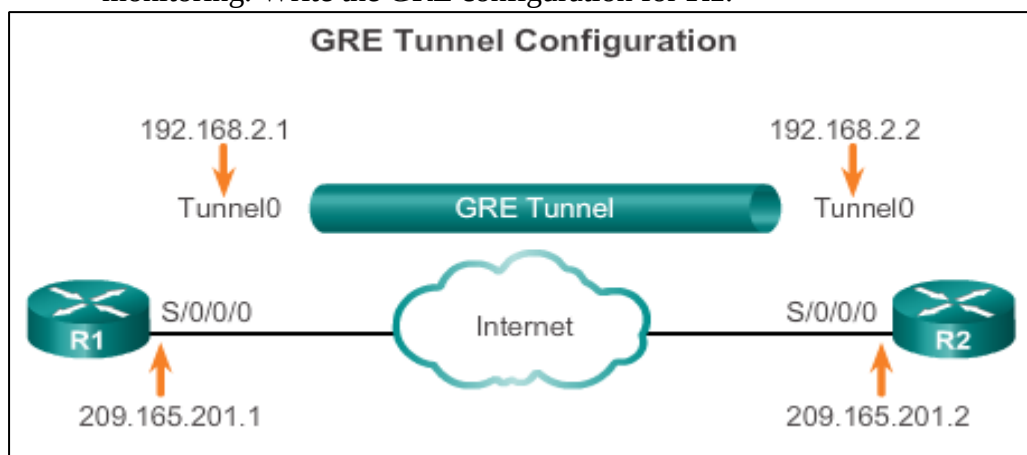


Figure 1

(7 Marks)

- iii. There are several commands that can be used to monitor and troubleshoot GRE tunnel, what command would you use:

- To determine whether the tunnel interface is up or down
- To verify the state of a GRE tunnel
- To verify that an OSPF routing has been configured

(3 Marks)

(b) Using table 1 below compare IPsec and SSL.

(10 Marks)

	SSL	IPsec
Applications		
Encryption		
Authentication		
Connection Complexity		
Connection Options		

Table 1

3. Third Exam Question

- (a) You are asked upgrade a network infrastructure that consists of 4 departments. You are also required to implement Wireless Network for each department. Each department operates on a different subnet for ease of identification and network management.
- Propose a wireless network design of your choice for each department. The maximum number of users in any department is 30.
 - The IP network address used is 192.169.2.0 and subnet mask 255.255.255.0
 - Outline all the necessary requirements that would be needed for the new design.
 - Provide a labelled network diagram to aid in your proposal.
 - State any assumptions made

(25 Marks)

4. Fourth Exam Question

- (a) As the Senior Network Administrator for UWTSD, provide relevant information to your technical team to understand IPv6 addressing which is required for the transition period of fading out IPV4 to IPv6 on all devices being use on the

network. You may use appropriate diagram if necessary.

(17 Marks)

- (b) In figure 2 below state the components that are required to establish a VPN and explain, how are secured by VPN?

(8 Marks)

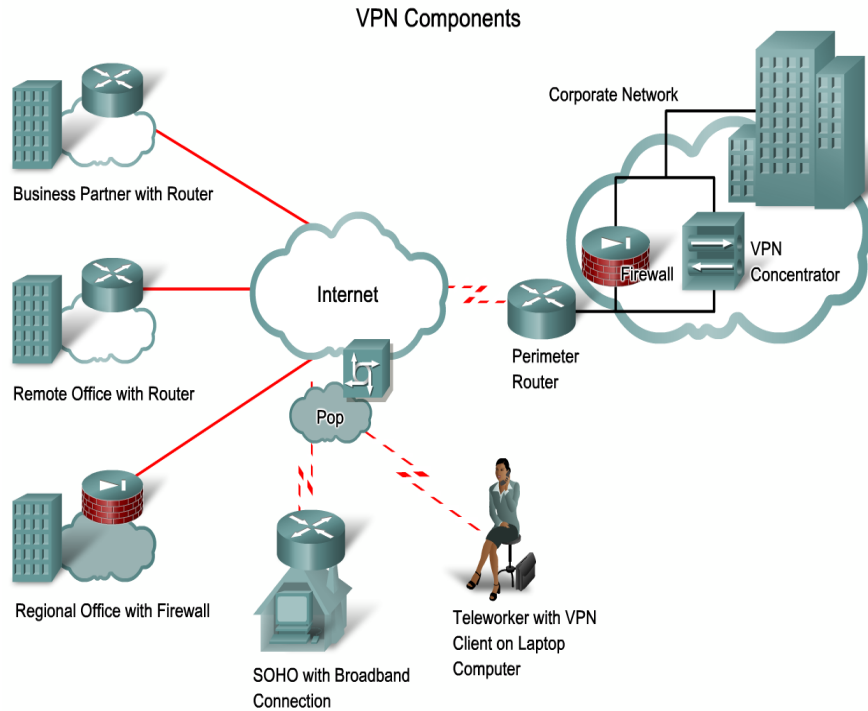


Figure 2

Diwedd/End