

TEST PROJECT IT NETWORK SYSTEMS ADMINISTRATION

WSC2015_TP39_D_PT_EN

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MODULE D – SECRET CHALLENGE

CONTENTS

This Test Project proposal consists of the following document/file:

WSC2015_TP39_D_PT_EN.docx

WSC2015_TP39_D_PT_XX.pka

INTRODUCTION

The competition has a fixed start and finish time. You must decide how to best divide your time.

Please **carefully** read the following instructions!

When the competition time ends, please save your file and add your Country-code in the end of the filename (change the XX), leave the Cisco Packet Tracer program and your workstation in a running state.

DO NOT FORGET TO SAVE YOUR PACKET TRACER FILE REGULARLY!

(The Cisco Packet Tracer program may crash and you could lose marks!)

DESCRIPTION OF PROJECT AND TASKS

Welcome to the WorldSkills Skill 39 Secret Challenge

Ask your expert for the Direction sheets for the clusters (this document).

Your Task is to finish the network configuration within two hours.

Work at a steady pace and make as many items work as you can to receive the maximum number of points.

If you get hung up on one item move on to the next.

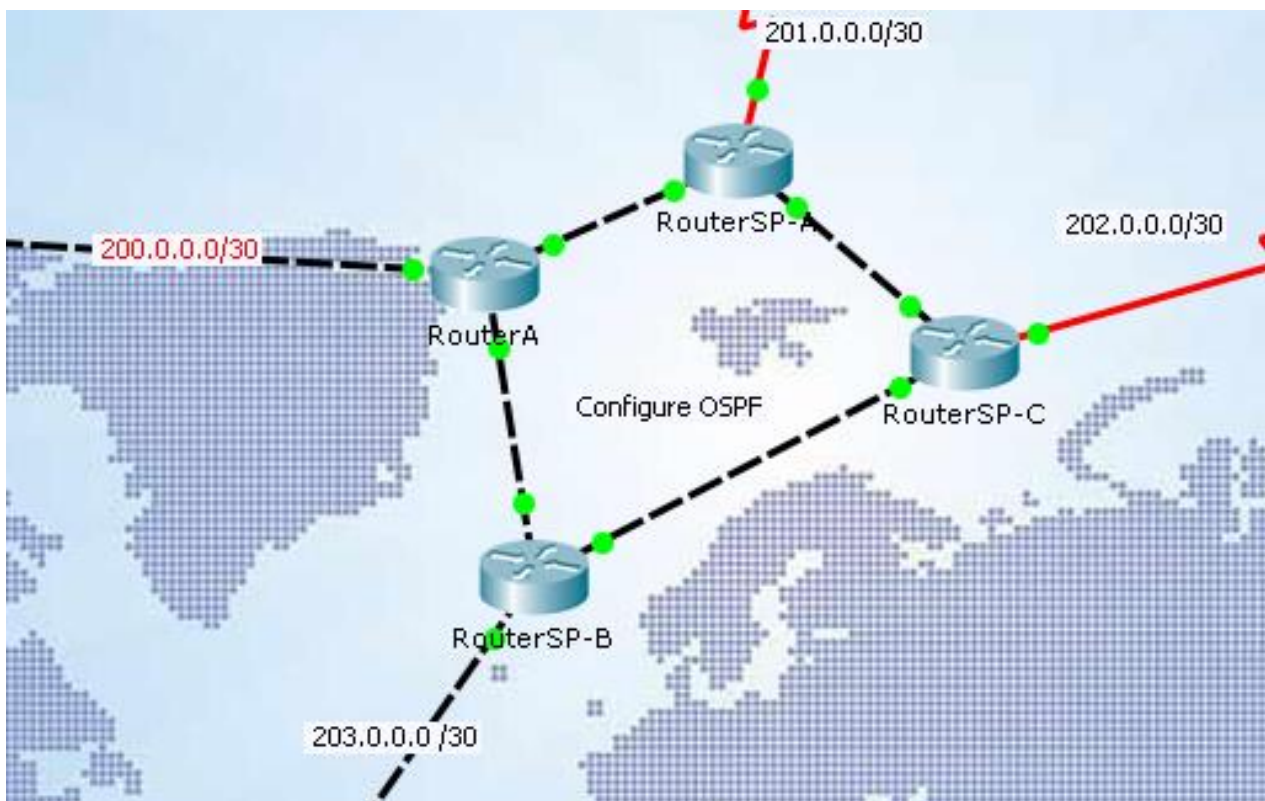
Good Luck

"The Cisco Team"

Configure OSPF Network (Opening Screen)

All interfaces have the correct IP addresses. You will need to:

1. Configure OSPF area 0 on all 4 routers
 - a. RouterA
 - b. Router-SP-A
 - c. Router-SP-B
 - d. Router-SP-C
2. You must be able to route any other protocol (RIP, EIGRP) across the OSPF network. All clusters must be able to route across this network.



Office ASA Cluster

Configure devices with IP Addresses listed in the chart

IP Address Chart

Device	IPv4	IPv6	Interface
Cloud DMZ-Router	192.168.2.2/24		FA0/0
	210.0.0.1/30		FA0/1
	201.0.0.1/30		S0/0/0
Branch2-RT	192.168.1.2/24	1920:1::2/80	FA0/0
BR-1External_Router	172.16.3.2/24	1720::2/64	FA0/0
Branch1-RT	209.165.200.225/29	2090::225/64	FA0/0
	172.16.3.1/24	1720::1/64	FA0/1
DMZ-SW			All ports on
Branch1-SW			All ports on
Branch2-SW			All ports on
CloudDMZ_Server	192.168.2.1	1920:2::1	Gateway
	192.168.2.3/24	1920:2::3/80	FA0
B2Internal_Host	192.168.1.1	1920:1::1	Gateway
	192.168.1.3/24	1920:1::3/80	FA0
External_Host	172.16.3.1	1720::1	Gateway
	172.16.3.3/24	1720::3/64	FA0
Branch ASA	192.168.1.1/24	1920:1::1/80	VLAN 1
	209.165.200.226/29	2090::226/64	VLAN2
	192.168.2.1/24	1920:2::1/80	VLAN3
	VLAN1	Name=inside	Et0/1, Et0/3, Et0/4, Et0/5, Et0/6, Et0/7
	VLAN2	Name=outside	Et0/0
	VLAN3	Name=dmz	Et0/2
To make things easier make all passwords on the routers = cisco			

Task 2

Configure the ASA so that:

1. From the Branch2-RT router telnet to BR-1External_Router this should work!
2. BR-1External_Router should not be able to Telnet Branch2-RT.
3. Configure an ACL use number 101 as the ACL number and allow Telnet so that BR-1External_Router can telnet Branch2-RT

Task 3

1. Configure static routes on all routers
2. Configure so that IPv6 is routed

VPN Cluster

Configure the VPN server to allow VPN access using the VPN client on the desktop PCs.

1. Check to be sure the IP numbers are correct and you can Ping the VPN_Server

Device	IP Address	Gateway	DNS
VPN_Server	110.2.0.2/24	110.2.0.1	110.2.0.2
Cash-Register	110.0.0.3	110.0.0.1	110.2.0.2
Orders-PC	110.0.0.2	110.0.0.1	110.2.0.2
Manager-LT	110.0.0.4	110.0.0.1	110.2.0.2
VPN_Router	FA0/0 110.3.0.1/24	FA0/1 110.2.0.1/24	S0/0/0 202.0.0.2/30
CoffeeShop-rt	FA0/0 110.3.0.2/24	FA0/1 110.0.0.1/24	
CoffeeShop-SW			

2. Configure the VPN_Server for AAA services

Username	user
Password	pass
Client name	vpnServer
Server Type	Radius

3. Configure the VPN_Router for AAA services

Group name	ciscogroup			
Group Key	ciscogroup			
ip local pool	VPNCLIENTS	110.1.1.100	110.1.1.200	Mask255.255.255.0
aaa authentication login	VPNAUTH	group radius local		
aaa authorization network	VPNAUTH	local		
Crypto map	mymap			
Routing protocol	RIP V2	default route 202.0.0.1	Static route Network 110.0.0.0 FA0/0	

4. VPN ServerTest VPN Access

- A. on the VPN_Server server config's tab go to AAA and turn on the AAA service on the server.
- B. Ping VPN_Server (110.2.0.2) from Cash-Register. This is done to update the ARP tables.
- C. From Cash-Register, start the VPN client and use the following information to connect:
Group name: ciscogroup
Group Key: ciscogroup
Server IP: 110.3.0.1
Username: user
Password: pass
- D. Once connected, Cash-Register should be assigned an address of 110.1.1.100.
- E. Ping Cash-Register PC (110.0.0.3) from Order-PC. The pings should be successful.

VoIP2 Internal System Cluster

Configuring a Local VoIP

Please configure local IP phones to obtain an IP number and the telephone numbers as assigned.

1. You must use the 1.0.0.0 network as the VoIP network
2. DHCP pool name is its
 - a. gateway 1.1.1.1
3. Please assign the following phone numbers to the IP devices

IPphone0	4321
IPPhone1	1234
PC0	7890
Analog Phone 0	9870

4. Configure OSPF area 0
5. Verify that you can make a call from all IP phones.

IPSec-Datacenter Cluster

IPSec-Datacenter Configuration

All IP addresses are correct on all devices in the IPSec-Datacenter Cluster.

1. Please configure routers DataCenter2 and DataCenter3 to use IPSec to pass packets from network 10.0.0.0/24 to network 10.4.0.0/24
 - a. Policy = 10
 - b. Encryption aes
 - c. Use 101 as ACL number
 - d. Map name is mymap
 - e. Be sure to set crypto isakmp key cisco address properly per router
 - f. DataCenter 3 has a partial configuration that is correct but is not complete.
2. Configure all routers in this cluster for eigrp 1
3. Verify that from the Testing-PC you can ping all servers.

