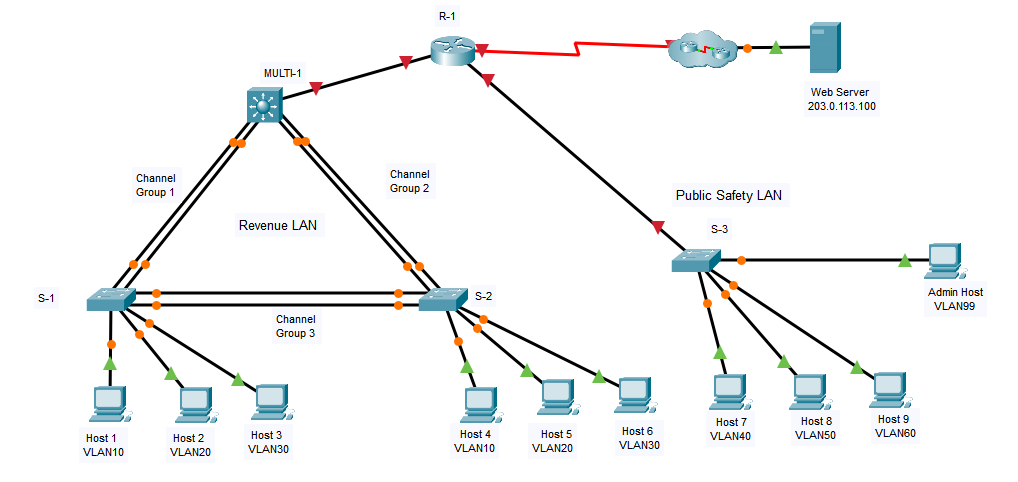
**实验二题目与得分点**



**Introduction**

In this assessment you are configuring a network that is using EtherChannel and routing between VLANs. For the sake of time, you will not be asked to perform all configurations on all network devices as you may be required to do in a real network or other assessment. Instead, you will use the skills and knowledge that you have learned in the labs in this course to configure the router and switches in the topology. In addition to EtherChannel and inter-VLAN routing, this task involves creating VLANs and trunks, and performing basic router and switch configuration.

**You are required to configure host default gateways; however host addresses are preconfigured.**

You will practice and be assessed on the following skills:

   Configuration of initial settings on a router.

   Configuration of initial settings on a switch, including SVI and SSH.

   Configuration of VLANs.

   Configuration of switchport VLAN membership.

   EtherChannel configuration.

   Troubleshooting VLANs.

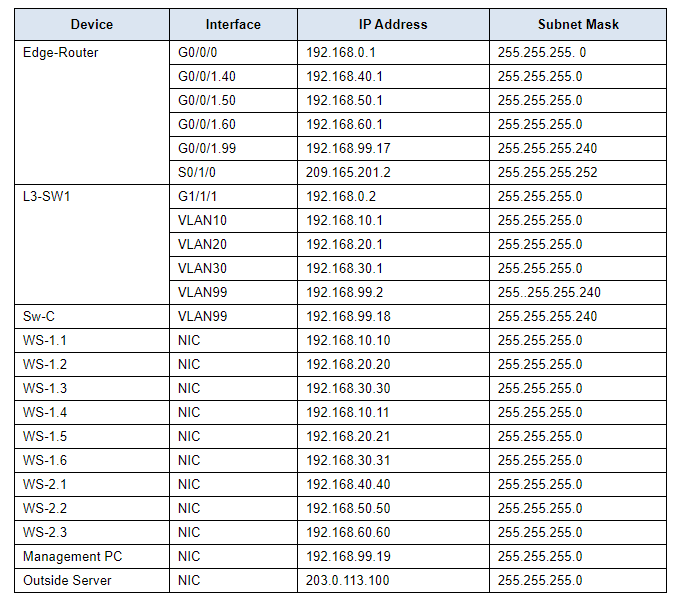
   Configuration of static trunking and DTP.

   Configuration of routing between VLANs on a Layer 3 switch.

   Configuration of router-on-a-stick inter- VLAN routing on a router.

   Configure default gateways on hosts.

**Addressing Table**



**Background / Scenario**

A corporation is planning to implement EtherChannel and a new VLAN design in order to make the network more efficient. You have been asked to work on a design and prototype of the new network. You have created the logical topology and now need to configure the devices in order to evaluate the design. You will configure VLANs and access port VLAN membership on access layer switches. You will also configure EtherChannel and trunking. Finally, you will configure a router and a Layer 3 switch to route between VLANs. Some addressing had already been configured.

**Instructions**

**Part 1: Basic Router Configuration**

**Step 1: Configure router Edge-Router with required settings.**

a.      Open a command window on router **Edge-Router** and move to privileged EXEC mode.

b.      Copy and paste the following configuration into the Edge-Router router CLI.

ip route 192.168.10.0 255.255.255.0 GigabitEthernet0/0/0

ip route 192.168.20.0 255.255.255.0 GigabitEthernet0/0/0

ip route 192.168.30.0 255.255.255.0 GigabitEthernet0/0/0

ip route 192.168.99.0 255.255.255.240 GigabitEthernet0/0/0

Be sure to press the <Enter> key after the last line to return to privileged EXEC mode prompt.

c.      Configure the following settings on the router:

o   The enable secret password.

o   A console password

o   Remote access to the VTY lines.

o   A banner MOTD message.

o   The device hostname according to the value in the addressing table.

o   All clear text passwords should be encrypted.

o   Interface addressing on G0/0/0 and S0/1/0.

o   Interface descriptions on G0/0/0 and S0/1/0.

**Note:** Be sure to make a record of the passwords that you create.

**Part 2: Basic Switch Configuration**

**Step 1: Configure Remote Management Addressing**

a.      Configure SVI 99 on switch Sw-C with IP addressing according to the Addressing Table.

b.      The Sw-C switch SVI should be reachable from other networks.

**Step 2: Configure Secure Remote Access**

On switch Sw-C, configure SSH as follows:

o   Username: **admin** password: **C1sco123!**

o   Modulus bits **1024**

o   All VTY lines should accept SSH connections only

o   Connections should require the previously configured username and password.

o   IP domain name: **acad.pt**

**Part 3: VLAN Configuration**

**Step 1: Configure VLANs according to the VLAN table.**

Use the VLAN Table to create and name the VLANs on the appropriate switches.

**VLAN Table**

| **VLAN** | **Name** | **IP Network** | **Subnet Mask** | **Devices** |
| --- | --- | --- | --- | --- |
| 10 | B1F1 | 192.168.10.0 | 255.255.255.0 | L3-SW1, Sw-A,  Sw-B |
| 20 | B1F2 | 192.168.20.0 | 255.255.255.0 | L3-SW1, Sw-A,  Sw-B |
| 30 | B1F4 | 192.168.30.0 | 255.255.255.0 | L3-SW1, Sw-A,  Sw-B |
| 40 | B3 | 192.168.40.0 | 255.255.255.0 | Sw-C |
| 50 | B4 | 192.168.50.0 | 255.255.255.0 | Sw-C |
| 60 | B5 | 192.168.60.0 | 255.255.255.0 | Sw-C |
| 99 | NetAdmin | 192.168.99.16 | 255.255.255.240 | Sw-C, L3-SW1 |

**Step 1: Assign switch ports to VLANs.**

Assign VLAN membership to static access switchports according to the Port to VLAN Assignment table.

**Port to VLAN Assignment Table**

| **Device** | **VLAN** | **VLAN Name** | **Port Assignments** |
| --- | --- | --- | --- |
| Sw-A | 10 | B1F1 | F0/7-10 |
| Sw-A | 20 | B1F2 | F0/11-15 |
| Sw-A | 30 | B1F4 | F0/16-24 |
| Sw-B | 10 | B1F1 | F0/7-10 |
| Sw-B | 20 | B1F2 | F0/11-15 |
| Sw-B | 30 | B1F4 | F0/16-24 |
| Sw-C | 40 | B3 | F0/1-5 |
| Sw-C | 50 | B4 | F0/6-10 |
| Sw-C | 60 | B5 | F0/11-15 |
| Sw-C | 99 | NetAdmin Native | F0/24 |

**Part 4: EtherChannel and Trunking Configuration**

**EtherChannel Port Assignments Table**

| **Channel Group** | **Devices in Groups** | **Ports in Group** |
| --- | --- | --- |
| 1 | L3-SW1 | G1/0/1, G1/0/2 |
| *1* | Sw-A | G0/1, G0/2 |
| 2 | L3-SW1 | G1/0/3, G1/0/4 |
| *2* | Sw-B | G0/1, G0/2 |
| 3 | Sw-A | F0/5, F0/6 |
| *3* | Sw-B | F0/5, F0/6 |

**Step 1: Configure EtherChannels**

Create EtherChannels according to the EtherChannel Port Assignments Table. Use the Cisco LACP protocol. Both sides of the channel should attempt to negotiate the link protocol.

**Step 2: Configure Trunking on the EtherChannels**

a.      Configure the port channel interfaces as static trunks. Disable DTP negotiation on all trunks.

b.      Troubleshoot any issues that prevent the formation of the EtherChannels.

**Note:** Packet Tracer requires configuration of trunking and DTP mode on both portchannel interfaces and the component physical interfaces.

**Step 3: Configure a static trunk uplink**

a.      On the Sw-C switch, configure the port that is connected to Edge-Router G0/0/0 as a static trunk.

b.      Configure the NetAdmin VLAN as the native VLAN.

c.      Disable DTP on the port.

**Part 5: Configure Inter-VLAN Routing**

**Step 1: Configure inter-VLAN routing on the Layer 3 switch.**

a.      Configure Inter-VLAN routing on the L3-SW1 Layer 3 switch for all VLANs in the VLAN Table that are configured on L3-SW1.

b.      Configure the switchport on L3-SW1 that is connected to Edge-Router with an IP address as shown in the Addressing Table.

**Step 2: Configure router-on-a-stick inter-VLAN routing on a router.**

a.      Configure inter-VLAN routing on Edge-Router for all the VLANs that are configured on the Sw-C switch. Use the information in the Addressing Table.

b.      Be sure to configure descriptions of all interfaces.

**Step 3: Configure default gateways on hosts.**

a.      Configure default gateway addresses on all hosts on the LANs.

b.      Verify connectivity between all hosts on both LANs with each other and the Outside Server server.

c.      Verify that a host can connect to the SVI of switch Sw-C over SSH.

**实验二翻译**

在此评估中，您将配置一个使用 EtherChannel 和 VLAN 之间路由的网络。出于时间考虑，不会要求您在所有网络设备上执行所有配置，因为您可能需要在真实网络或其他评估中执行此操作。相反，您将使用在本课程的实验室中学到的技能和知识来配置拓扑中的路由器和交换机。除了 EtherChannel 和 VLAN 间路由之外，此任务还涉及创建 VLAN 和中继，以及执行基本的路由器和交换机配置。

您需要配置主机默认网关；但是主机地址是预先配置的。

您将练习并评估以下技能：

 在路由器上配置初始设置。

 配置交换机上的初始设置，包括 SVI 和 SSH。

 VLAN 的配置。

 配置交换机端口 VLAN 成员资格。

 EtherChannel 配置。

 VLAN 故障排除。

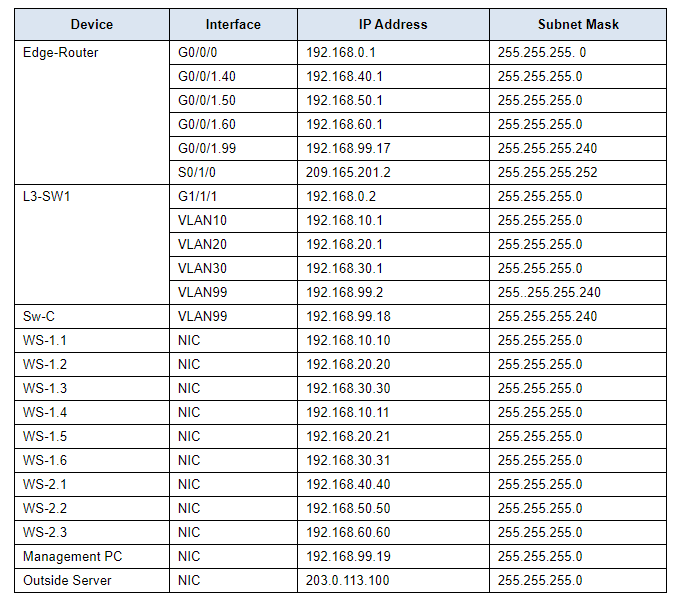
 配置静态中继和 DTP。

 在第 3 层交换机上配置 VLAN 之间的路由。

 在路由器上配置单臂路由器 VLAN 间路由。

 在主机上配置默认网关。

寻址表



背景/情景

一家公司正计划实施 EtherChannel 和新的 VLAN 设计，以提高网络效率。您被要求进行新网络的设计和原型设计。您已经创建了逻辑拓扑，现在需要配置设备以评估设计。您将在接入层交换机上配置 VLAN 和接入端口 VLAN 成员资格。您还将配置 EtherChannel 和中继。最后，您将配置路由器和第 3 层交换机以在 VLAN 之间进行路由。已经配置了一些寻址。

指示

**第 1 部分：基本路由器配置**

第 1 步：使用所需设置配置路由器 Edge-Router。

a。在路由器 Edge-Router 上打开命令窗口并进入特权 EXEC 模式。

b。将以下配置复制并粘贴到 Edge-Router 路由器 CLI 中。

ip 路由 192.168.10.0 255.255.255.0 GigabitEthernet0/0/0

ip 路由 192.168.20.0 255.255.255.0 GigabitEthernet0/0/0

ip 路由 192.168.30.0 255.255.255.0 GigabitEthernet0/0/0

ip 路由 192.168.99.0 255.255.255.240 GigabitEthernet0/0/0

请务必在最后一行之后按 <Enter> 键以返回特权 EXEC 模式提示。

C。在路由器上配置以下设置：

o 启用密码。

o 控制台密码

o 远程访问 VTY 线路。

o 横幅 MOTD 消息。

o 根据寻址表中的值的设备主机名。

o 所有明文密码都应加密。

o G0/0/0 和 S0/1/0 上的接口寻址。

o G0/0/0 和 S0/1/0 上的接口说明。

注意：请务必记录您创建的密码。

**第 2 部分：基本交换机配置**

步骤 1：配置远程管理寻址

a。根据寻址表在交换机 Sw-C 上配置 SVI 99 并使用 IP 寻址。

b。 Sw-C 开关 SVI 应该可以从其他网络访问。

步骤 2：配置安全远程访问

在交换机 Sw-C 上，按如下方式配置 SSH：

o 用户名：admin 密码：C1sco123！

o 模数位 1024

o 所有 VTY 线路应仅接受 SSH 连接

o 连接应需要先前配置的用户名和密码。

o IP 域名：acad.pt

**第 3 部分：VLAN 配置**

步骤 1：根据 VLAN 表配置 VLAN。

使用 VLAN 表在适当的交换机上创建和命名 VLAN。

VLAN 表

| **VLAN** | **Name** | **IP Network** | **Subnet Mask** | **Devices** |
| --- | --- | --- | --- | --- |
| 10 | B1F1 | 192.168.10.0 | 255.255.255.0 | L3-SW1, Sw-A,  Sw-B |
| 20 | B1F2 | 192.168.20.0 | 255.255.255.0 | L3-SW1, Sw-A,  Sw-B |
| 30 | B1F4 | 192.168.30.0 | 255.255.255.0 | L3-SW1, Sw-A,  Sw-B |
| 40 | B3 | 192.168.40.0 | 255.255.255.0 | Sw-C |
| 50 | B4 | 192.168.50.0 | 255.255.255.0 | Sw-C |
| 60 | B5 | 192.168.60.0 | 255.255.255.0 | Sw-C |
| 99 | NetAdmin | 192.168.99.16 | 255.255.255.240 | Sw-C, L3-SW1 |

第 1 步：将交换机端口分配给 VLAN。

根据端口到 VLAN 分配表，将 VLAN 成员资格分配给静态接入交换机端口。

端口到 VLAN 分配表

| **Device** | **VLAN** | **VLAN Name** | **Port Assignments** |
| --- | --- | --- | --- |
| Sw-A | 10 | B1F1 | F0/7-10 |
| Sw-A | 20 | B1F2 | F0/11-15 |
| Sw-A | 30 | B1F4 | F0/16-24 |
| Sw-B | 10 | B1F1 | F0/7-10 |
| Sw-B | 20 | B1F2 | F0/11-15 |
| Sw-B | 30 | B1F4 | F0/16-24 |
| Sw-C | 40 | B3 | F0/1-5 |
| Sw-C | 50 | B4 | F0/6-10 |
| Sw-C | 60 | B5 | F0/11-15 |
| Sw-C | 99 | NetAdmin Native | F0/24 |

**第 4 部分：EtherChannel 和中继配置**

EtherChannel 端口分配表

| **Channel Group** | **Devices in Groups** | **Ports in Group** |
| --- | --- | --- |
| 1 | L3-SW1 | G1/0/1, G1/0/2 |
| *1* | Sw-A | G0/1, G0/2 |
| 2 | L3-SW1 | G1/0/3, G1/0/4 |
| *2* | Sw-B | G0/1, G0/2 |
| 3 | Sw-A | F0/5, F0/6 |
| *3* | Sw-B | F0/5, F0/6 |

第 1 步：配置 EtherChannel

根据 EtherChannel 端口分配表创建 EtherChannel。使用 Cisco LACP 协议。通道的双方都应该尝试协商链接协议。

步骤 2：在 EtherChannel 上配置中继

a。将端口通道接口配置为静态中继。在所有中继上禁用 DTP 协商。

b。对阻止形成 EtherChannel 的任何问题进行故障排除。

注意：Packet Tracer 需要在端口通道接口和组件物理接口上配置中继和 DTP 模式。

步骤 3：配置静态中继上行链路

a。在 Sw-C 交换机上，将连接到 Edge-Router G0/0/0 的端口配置为静态中继。

b。将 NetAdmin VLAN 配置为本机 VLAN。

C。在端口上禁用 DTP。

**第 5 部分：配置 VLAN 间路由**

步骤 1：在第 3 层交换机上配置 VLAN 间路由。

a。为 L3-SW1 上配置的 VLAN 表中的所有 VLAN 在 L3-SW1 第 3 层交换机上配置 VLAN 间路由。

b。使用地址表中所示的 IP 地址配置连接到 Edge-Router 的 L3-SW1 上的交换机端口。

第 2 步：在路由器上配置单臂路由器 VLAN 间路由。

a。为在 Sw-C 交换机上配置的所有 VLAN 在 Edge-Router 上配置 VLAN 间路由。使用寻址表中的信息。

b。请务必配置所有接口的描述。

第 3 步：在主机上配置默认网关。

a。在 LAN 上的所有主机上配置默认网关地址。

b。验证两个 LAN 上的所有主机之间的连接以及外部服务器之间的连接。

C。验证主机是否可以通过 SSH 连接到交换机 Sw-C 的 SVI。

**得分点**

**Performance Component: Basic Device Configuraton**

Description:  
Maximum Points = 25

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Work Product Feature** | | | **Student Result** | **Earned Points** | **Max Points** |
| Basic Device Configuraton | | | | 19 | 25 |
|  | Confiugre the Switch Management Interface | | | 5 | 5 |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:Vlan99:Power* | *Correct* |  |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:Vlan99:IP Address* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:Vlan99:Subnet Mask* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Default Gateway* | *Correct* |  |
|  | Configure Secure Access with SSH | | | 0 | 6 |
|  |  | *Network:[[LAN2-SW1Var]]:User Names:admin* | *Correct* |  |  |
|  |  | ***Network:[[LAN2-SW1Var]]:DNS:IP Domain Name*** | ***Incorrect*** |  |
|  |  | *Network:[[LAN2-SW1Var]]:Security:Modulus Bits* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:VTY Lines:0:Login* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:VTY Lines:0:Transport Input* | *Correct* |  |
|  |  | ***Network:[[LAN2-SW1Var]]:Enable Secret*** | ***Incorrect*** |  |
|  | Configure Basic Router Settings | | | 7 | 7 |
|  |  | *Network:[[routerVar]]:Console Line:Password* | *Correct* |  |  |
|  |  | *Network:[[routerVar]]:VTY Lines:0:Password* | *Correct* |  |
|  |  | *Network:[[routerVar]]:VTY Lines:0:Login* | *Correct* |  |
|  |  | *Network:[[routerVar]]:Enable Secret* | *Correct* |  |
|  |  | *Network:[[routerVar]]:Host Name* | *Correct* |  |
|  |  | *Network:[[routerVar]]:Service Password Encryption* | *Correct* |  |
|  |  | *Network:[[routerVar]]:Banner motd* | *Correct* |  |
|  | Configure Basic Router Interface Settings | | | 7 | 7 |
|  |  | *Network:[[routerVar]]:Ports:GigabitEthernet0/0/0:IP Address* | *Correct* |  |  |
|  |  | *Network:[[routerVar]]:Ports:GigabitEthernet0/0/0:Subnet Mask* | *Correct* |  |
|  |  | *Network:[[routerVar]]:Ports:GigabitEthernet0/0/0:Power* | *Correct* |  |
|  |  | *Network:[[routerVar]]:Ports:GigabitEthernet0/0/0:Description* | *Correct* |  |
|  |  | *Network:[[routerVar]]:Ports:Serial0/1/0:IP Address* | *Correct* |  |
|  |  | *Network:[[routerVar]]:Ports:Serial0/1/0:Subnet Mask* | *Correct* |  |
|  |  | *Network:[[routerVar]]:Ports:Serial0/1/0:Power* | *Correct* |  |
|  |  | *Network:[[routerVar]]:Ports:Serial0/1/0:Description* | *Correct* |  |

**Performance Component: Configure VLANs and Trunks**

Description:  
Maximum Points = 25

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Work Product Feature** | | | **Student Result** | **Earned Points** | **Max Points** |
| Configure VLANs and Trunks | | | | 25 | 25 |
|  | Create and Name VLANs | | | 6 | 6 |
|  |  | *Network:[[multiswitchVar]]:VLANS:10:VLAN Name* | *Correct* |  |  |
|  |  | *Network:[[multiswitchVar]]:VLANS:20:VLAN Name* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:VLANS:30:VLAN Name* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:VLANS:10:VLAN Name* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:VLANS:20:VLAN Name* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:VLANS:30:VLAN Name* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:VLANS:10:VLAN Name* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:VLANS:20:VLAN Name* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:VLANS:30:VLAN Name* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:VLANS:40:VLAN Name* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:VLANS:50:VLAN Name* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:VLANS:60:VLAN Name* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:VLANS:99:VLAN Name* | *Correct* |  |
|  | Assign Switchports to VLANs | | | 7 | 7 |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/7:Access VLAN* | *Correct* |  |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/8:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/9:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/10:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/11:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/12:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/13:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/14:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/15:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/16:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/17:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/18:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/19:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/20:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/21:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/22:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/23:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/24:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/7:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/8:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/9:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/10:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/11:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/12:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/13:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/14:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/15:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/16:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/24:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/15:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/17:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/18:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/19:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/20:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/21:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/22:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/23:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/24:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/1:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/2:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/3:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/4:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/5:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/6:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/7:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/8:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/9:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/10:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/11:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/12:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/13:Access VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:FastEthernet0/14:Access VLAN* | *Correct* |  |
|  | Configure EtherChannel Trunks | | | 8 | 8 |
|  |  | *Network:[[multiswitchVar]]:Ports:Port-channel1:Port Type* | *Correct* |  |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Port-channel2:Port Type* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/5:Port Mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/5:Nonegotiate* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/6:Port Mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/6:Nonegotiate* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:GigabitEthernet0/1:Port Mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:GigabitEthernet0/1:Nonegotiate* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:GigabitEthernet0/2:Port Mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:GigabitEthernet0/2:Nonegotiate* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/5:Port Mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/5:Nonegotiate* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/6:Port Mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/6:Nonegotiate* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:GigabitEthernet0/1:Port Mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:GigabitEthernet0/1:Nonegotiate* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:GigabitEthernet0/2:Port Mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:GigabitEthernet0/2:Nonegotiate* | *Correct* |  |
|  | Configure Trunking | | | 4 | 4 |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:GigabitEthernet0/1:Port Mode* | *Correct* |  |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:GigabitEthernet0/1:Native VLAN* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:GigabitEthernet0/1:Nonegotiate* | *Correct* |  |
|  |  | *Network:[[LAN2-SW1Var]]:Ports:GigabitEthernet0/1:Dynamic Mode* | *Correct* |  |

**Performance Component: Inter-VLAN Routing Configuration**

Description:  
Maximum Points = 35

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Work Product Feature** | | | **Student Result** | **Earned Points** | **Max Points** |
| Inter-VLAN Routing Configuration | | | | 17 | 35 |
|  | Create Subinterfaces on a Router | | | 0 | 5 |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1:Power*** | ***Incorrect*** |  |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.40:Power*** | ***Incorrect*** |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.50:Power*** | ***Incorrect*** |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.60:Power*** | ***Incorrect*** |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.99:Power*** | ***Incorrect*** |  |
|  | Configure Subinterface Addressing | | | 0 | 6 |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.40:IP Address*** | ***Incorrect*** |  |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.40:Subnet Mask*** | ***Incorrect*** |  |
|  |  | *Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.40:Description* | *Correct* |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.50:IP Address*** | ***Incorrect*** |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.50:Subnet Mask*** | ***Incorrect*** |  |
|  |  | *Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.50:Description* | *Correct* |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.60:IP Address*** | ***Incorrect*** |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.60:Subnet Mask*** | ***Incorrect*** |  |
|  |  | *Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.60:Description* | *Correct* |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.99:IP Address*** | ***Incorrect*** |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.99:Subnet Mask*** | ***Incorrect*** |  |
|  |  | *Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.99:Description* | *Correct* |  |
|  | Configure Subinterface Encapsulation | | | 0 | 7 |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.40:802.1Q:VLAN ID*** | ***Incorrect*** |  |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.50:802.1Q:VLAN ID*** | ***Incorrect*** |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.60:802.1Q:VLAN ID*** | ***Incorrect*** |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.99:802.1Q:VLAN ID*** | ***Incorrect*** |  |
|  |  | ***Network:[[routerVar]]:Ports:GigabitEthernet0/0/1.99:802.1Q:Native VLAN*** | ***Incorrect*** |  |
|  | Create VLAN Interfaces | | | 6 | 6 |
|  |  | *Network:[[multiswitchVar]]:Routes:IP Routing* | *Correct* |  |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan10:Power* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan10:Port Type* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan20:Power* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan20:Port Type* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan30:Power* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan30:Port Type* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan99:Power* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan99:Port Type* | *Correct* |  |
|  | Configure VLAN Interface Addressing | | | 6 | 6 |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan10:IP Address* | *Correct* |  |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan10:Subnet Mask* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan20:IP Address* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan20:Subnet Mask* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan30:IP Address* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan30:Subnet Mask* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan99:IP Address* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:Ports:Vlan99:Subnet Mask* | *Correct* |  |
|  | Configure Layer 3 Switch Ports | | | 5 | 5 |
|  |  | *Network:[[multiswitchVar]]:Ports:GigabitEthernet1/1/1:SwitchPort* | *Correct* |  |  |
|  |  | *Network:[[multiswitchVar]]:Ports:GigabitEthernet1/1/1:IP Address* | *Correct* |  |
|  |  | *Network:[[multiswitchVar]]:Ports:GigabitEthernet1/1/1:Subnet Mask* | *Correct* |  |

**Performance Component: EtherChannel Configuration**

Description:  
Maximum Points = 15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Work Product Feature** | | | **Student Result** | **Earned Points** | **Max Points** |
| EtherChannel Configuration | | | | 15 | 15 |
|  | Create EtherChannel Group 1 | | | 5 | 5 |
|  |  | *Network:[[multiswitchVar]]:Ports:Port-channel1:Power* | *Correct* |  |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:GigabitEthernet0/1:Channel Group* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:GigabitEthernet0/1:Channel mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:GigabitEthernet0/1:Channel protocol* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:GigabitEthernet0/2:Channel Group* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:GigabitEthernet0/2:Channel mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:GigabitEthernet0/2:Channel protocol* | *Correct* |  |
|  | Create EtherChannel Group 2 | | | 5 | 5 |
|  |  | *Network:[[multiswitchVar]]:Ports:Port-channel2:Power* | *Correct* |  |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:GigabitEthernet0/1:Channel Group* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:GigabitEthernet0/1:Channel mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:GigabitEthernet0/1:Channel protocol* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:GigabitEthernet0/2:Channel Group* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:GigabitEthernet0/2:Channel mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:GigabitEthernet0/2:Channel protocol* | *Correct* |  |
|  | Create EtherChannel Group 3 | | | 5 | 5 |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/5:Channel Group* | *Correct* |  |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/5:Channel mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/5:Channel protocol* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/6:Channel Group* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/6:Channel mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW1Var]]:Ports:FastEthernet0/6:Channel protocol* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/5:Channel Group* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/5:Channel mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/5:Channel protocol* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/6:Channel Group* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/6:Channel mode* | *Correct* |  |
|  |  | *Network:[[LAN1-SW2Var]]:Ports:FastEthernet0/6:Channel protocol* | *Correct* |  |

**Performance Component: Configure Default Gateways**

Description:  
Maximum Points = 10

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Work Product Feature** | | | **Student Result** | **Earned Points** | **Max Points** |
| Configure Default Gateways | | | | 10 | 10 |
|  | LAN 1 Default Gateways | | | 5 | 5 |
|  |  | *Network:[[LAN1-PC1Var]]:Default Gateway* | *Correct* |  |  |
|  |  | *Network:[[LAN1-PC2Var]]:Default Gateway* | *Correct* |  |
|  |  | *Network:[[LAN1-PC3Var]]:Default Gateway* | *Correct* |  |
|  |  | *Network:[[LAN1-PC4Var]]:Default Gateway* | *Correct* |  |
|  |  | *Network:[[LAN1-PC5Var]]:Default Gateway* | *Correct* |  |
|  |  | *Network:[[LAN1-PC6Var]]:Default Gateway* | *Correct* |  |
|  | LAN 2 Default Gateways | | | 5 | 5 |
|  |  | *Network:[[LAN2-PC1Var]]:Default Gateway* | *Correct* |  |  |
|  |  | *Network:[[LAN2-PC2Var]]:Default Gateway* | *Correct* |  |
|  |  | *Network:[[LAN2-PC3Var]]:Default Gateway* | *Correct* |  |
| . |  | *Network:[[LAN2-99Var]]:Default Gateway* | *Correct* |  |