3.3.11

Syntax Checker - VLAN Configuration

In this Syntax Checker activity, you will implement and verify a VLAN configuration for switch interfaces based on the specified requirements.

Complete the following steps to create a data VLAN:

Enter global configuration mode.

Create VLAN 20.

Name the VLAN student.

Return to privileged EXEC mode.

S1#configure terminal

Enter configuration commands, one per line. End with CNTL/Z.

S1(config)#vlan 20

S1(config-vlan)#name student

S1(config-vlan)#end

\*Mar 31, 08:55:14.5555: %SYS-5-CONFIG\_I: Configured from console by console

Display the brief VLAN information.

S1#show vlan brief

VLAN Name Status Ports

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1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4

Fa0/5, Fa0/6, Fa0/7, Fa0/8

Fa0/9, Fa0/10, Fa0/11, Fa0/12

Fa0/13, Fa0/14, Fa0/15, Fa0/16

Fa0/17, Fa0/18, Fa0/19, Fa0/20

Fa0/21, Fa0/22, Fa0/23, Fa0/24

Gi0/1, Gi0/2

20 student active

1002 fddi-default act/unsup

1003 token-ring-default act/unsup

1004 fddinet-default act/unsup

1005 trnet-default act/unsup

Complete the following steps to create a voice VLAN:

Enter global configuration mode.

Create VLAN 150.

Name the VLAN VOICE.

Return to global configuration mode.

S1#configure terminal

S1(config)#vlan 150

S1(config-vlan)#name VOICE

S1(config-vlan)#exit

Complete the following steps to assign the data and voice VLANs to a port:

Enter interface configuration mode. Use fa0/18 as the interface designation.

Configure the port as an access port.

Assign the data VLAN 20 to the port.

Enable QoS settings with the mls qos trust cos command.

Assign the voice VLAN 150 to the port.

Return to privileged EXEC mode.

S1(config)#interface fa0/18

S1(config-if)#switchport mode access

S1(config-if)#switchport access vlan 20

S1(config-if)#mls qos trust cos

S1(config-if)#switchport voice vlan 150

S1(config-if)#end

Display the brief vlan information.

S1#show vlan brief

LAN Name Status Ports

---- -------------------------------- --------- -------------------------------

1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4

Fa0/5, Fa0/6, Fa0/7, Fa0/8

Fa0/9, Fa0/10, Fa0/11, Fa0/12

Fa0/13, Fa0/14, Fa0/15, Fa0/16

Fa0/17, Fa0/19, Fa0/20, Fa0/21

Fa0/22, Fa0/23, Fa0/24, Gi0/1

Gi0/2

20 student active Fa0/18

150 VOICE active Fa0/18

1002 fddi-default act/unsup

1003 token-ring-default act/unsup

1004 fddinet-default act/unsup

1005 trnet-default act/unsup

Complete the following steps to delete and verify a deleted VLAN on a port:

Enter global configuration mode.

Enter interface configuration mode. Use fa0/18 as the interface designation.

Remove the data VLAN from the port.

Use the do form of the command to display brief VLAN information.

S1#configure terminal

S1(config)#interface fa0/18

S1(config-if)#no switchport access vlan

S1(config-if)#do show vlan brief

VLAN Name Status Ports

---- -------------------------------- --------- -------------------------------

1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4

Fa0/5, Fa0/6, Fa0/7, Fa0/8

Fa0/9, Fa0/10, Fa0/11, Fa0/12

Fa0/13, Fa0/14, Fa0/15, Fa0/16

Fa0/17, Fa0/18, Fa0/19, Fa0/20

Fa0/21, Fa0/22, Fa0/23, Fa0/24

Gi0/1, Gi0/2

20 student active

150 VOICE active Fa0/18

1002 fddi-default act/unsup

1003 token-ring-default act/unsup

1004 fddinet-default act/unsup

1005 trnet-default act/unsup

Complete the following steps to assign VLAN 20 to another interface.

Enter interface configuration mode. Use fa0/11 as the interface designation.

Assign VLAN 20 to the port.

Return to privileged EXEC mode.

S1(config-if)#interface fa0/11

S1(config-if)#switchport mode access

S1(config-if)#switchport access vlan 20

S1(config-if)#end

Display the brief VLAN information.

S1#show vlan brief

LAN Name Status Ports

---- -------------------------------- --------- -------------------------------

1 default active Fa0/1, Fa0/2, Fa0/3, Fa0/4

Fa0/5, Fa0/6, Fa0/7, Fa0/8

Fa0/9, Fa0/10, Fa0/12, Fa0/13

Fa0/14, Fa0/15, Fa0/16, Fa0/17

Fa0/19, Fa0/20, Fa0/21, Fa0/22

Fa0/23, Fa0/24, Gig0/1, Gig0/2

20 student active Fa0/11

150 VOICE active Fa0/18

1002 fddi-default act/unsup

1003 token-ring-default act/unsup

1004 fddinet-default act/unsup

1005 trnet-default act/unsup

Display the VLAN information specifically for the student VLAN.

S1#show vlan name student

VLAN Name Status Ports

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20 student active Fa0/11, Fa0/18

VLAN Type SAID MTU Parent RingNo BridgeNo Stp BrdgMode Trans1 Trans2

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20 enet 100020 1500 - - - - - 0 0

Display summary information for VLANs

S1#show vlan summary

Number of existing VLANs : 7

Number of existing VTP VLANs : 7

Number of existing extended VLANS : 0

Display the switchport information. Use fa0/11 for the interface designation.

S1#show interface fa0/11 switchport

Name: Fa0/11

Switchport: Enabled

Administrative Mode: static access

Operational Mode: down

Administrative Trunking Encapsulation: dot1q

Operational Trunking Encapsulation: native

Negotiation of Trunking: Off

Access Mode VLAN: 20 (Students)

Trunking Native Mode VLAN: 1 (default)

Voice VLAN: none

(output omitted)

You successfully configured and verified VLAN configuration on switch interfaces.

Reset