OSPF Godiva612 2018-11-28 发表

组网及远明

1.1适用产品系列

本案例适用于如S5024PV3-EI-HPWR、S5048PV3-EI、S5120V2-52P-LI、S5120V2-28P-SI、S5130-52S-EI、S5130S-28S-EI、S5150X-16ST-EI等S5000PV3、S5120V2、S5130、S5150系列的交换机

1.2配置需求

SWA和SWB通过VLAN20互联、通过OSPF路由协议实现PC1和PC2的互连互通。

2 组网图



配置步骤 3.1 SWA配置 #创建vlan10和vlan20,并把G1/0/1口加入vlan10、1/0/2口加入vlan20,并且配置vlan10和vlan20的 虚接口地址 <SWA>system-view System View: return to User View with Ctrl+Z. [SWA]vlan 10 [SWA-vlan10]port GigabitEthernet 1/0/1 [SWA-vlan10]quit [SWA]vlan 20 [SWA-vlan20]port GigabitEthernet 1/0/2 [SWA-vlan20]quit [SWA]interface vlan 10 [SWA-Vlan-interface10]ip address 192.168.10.1 255.255.255.0 [SWA-Vlan-interface10]quit [SWA]interface vlan 20 [SWA-Vlan-interface20]ip address 192.168.20.1 255.255.255.0 [SWA-Vlan-interface20]quit #启动ospf协议,并设置路由器的router id [SWA]ospf 1 router-id 192.168.20.1 #配置区域0并且发布网段 [SWA-ospf-1]area 0 [SWA-ospf-1-area-0.0.0.0]network 192.168.10.0 0.0.0.255 [SWA-ospf-1-area-0.0.0.0]network 192.168.20.0 0.0.0.255 [SWA-ospf-1-area-0.0.0.0]quit [SWA-ospf-1]quit #保存配置 [SWA]save force

#创建vlan10和vlan30,并把G1/0/1口加入vlan20、1/0/2口加入vlan30,并且配置vlan20和vlan30的 虚接口地址 <SWB>system-view System View: return to User View with Ctrl+Z. [SWB]vlan 20 [SWB-vlan20]port GigabitEthernet 1/0/1 [SWB-vlan20]quit [SWB]vlan 30 [SWB-vlan30]port GigabitEthernet 1/0/2 [SWB-vlan30]quit [SWB]interface vlan 20 [SWB-Vlan-interface20]ip address 192.168.20.2 255.255.255.0 [SWB-Vlan-interface20]quit [SWB]interface vlan 30 [SWB-Vlan-interface30]ip address 192.168.30.1 255.255.255.0 [SWB-Vlan-interface30]quit #启动ospf协议,并设置路由器的router id [SWB]ospf 1 router-id 192.168.20.2 #配置区域0并且发布网段 [SWB-ospf-1]area 0 [SWB-ospf-1-area-0.0.0.0]network 192.168.20.0 0.0.0.255 [SWB-ospf-1-area-0.0.0.0]network 192.168.30.0 0.0.0.255 [SWB-ospf-1-area-0.0.0.0]quit [SWB-ospf-1]quit #保存配置 [SWB]save force 3.3 验证配置 # 查看Switch A的OSPF邻居 <SWA>display ospf peer OSPF Process 1 with Router ID 192.168.20.1 Neighbor Brief Information Area: 0.0.0.0 Router ID Address Pri Dead-Time State Interface 192.168.20.2 192.168.20.2 1 35 Full/BDR Vlan20 #查看Switch A的OSPF路由信息 <SWA>display ospf routing OSPF Process 1 with Router ID 192.168.20.1 Routing Table Topology base (MTID 0) Routing for network Destination Cost Type NextHop AdvRouter Area 192.168.10.0/24 1 Stub 0.0.0.0 192.168.20.1 0.0.0.0 192.168.30.0/24 2 Stub 192.168.20.2 192.168.20.2 0.0.0.0 192.168.20.0/24 1 Transit 0.0.0.0 192.168.20.1 0.0.0.0 #查看Switch A的路由表信息,有到192.168.30.0/24网段的路由 <SWA>display ip routing-table Destinations : 17 Routes : 17 Destination/Mask Proto Pre Cost NextHop Interface 0.0.0/32 Direct 0 0 127.0.0.1 InLoop0 127.0.0.1 InLoop0 127.0.0.0/8 Direct 0 0 127.0.0.0/32 Direct 0 0 127.0.0.1 InLoop0 127.0.0.1/32 Direct 0 0 127.0.0.1 InLoop0 127.255.255.255/32 Direct 0 0 127.0.0.1 InLoop0 192.168.10.0/24 Direct 0 0 192.168.10.1 Vlan10
 192.168.10.0/32
 Direct
 0
 192.168.10.1
 Vlan10

 192.168.10.1/32
 Direct
 0
 127.0.0.1
 InLoop0
192.168.10.255/32 Direct 0 0 192.168.10.1 Vlan10 192.168.20.0/24 Direct 0 0 192.168.20.1 Vlan20 192.168.20.0/32 Direct 0 0 192.168.20.1 Vlan20 192.168.20.1/32 Direct 0 0 127.0.0.1 InLoop0 192.168.20.255/32 Direct 0 0 192.168.20.1 Vlan20 192.168.30.0/24 O_INTRA 10 2 192.168.20.2 Vlan20 224.0.0.0/4 Direct 0 0 0.0.0.0 NULL0

224.0.0.0/24 Direct 0 0 0.0.0 NULL0 255.255.255.255/32 Direct 0 0 127.0.0.1 InLoop0 # PC1 ping PC2 正常通信 C:\Users\mfw2656>ping 192.168.30.2 Ping 192.168.30.2 (192.168.30.2): 56 data bytes, press CTRL_C to break 56 bytes from 192.168.30.2: icmp_seq=0 ttl=254 time=8.000 ms 56 bytes from 192.168.30.2: icmp_seq=1 ttl=254 time=2.000 ms 56 bytes from 192.168.30.2: icmp_seq=2 ttl=254 time=3.000 ms 56 bytes from 192.168.30.2: icmp_seq=2 ttl=254 time=3.000 ms 56 bytes from 192.168.30.2: icmp_seq=3 ttl=254 time=3.000 ms 57 bytes from 192.168.30.2: icmp_seq=3 ttl=254 time=3.000 ms 58 bytes from 192.168.30.2: icmp_seq=3 ttl=254 time=3.000 ms 59 bytes from 192.168.30.2: icmp_seq=3 ttl=354 time=3.000 ms 50 bytes from 192.168.30.2: icmp

最短 = 2ms, 最长 = 3ms, 平均 = 2ms

配置关键点