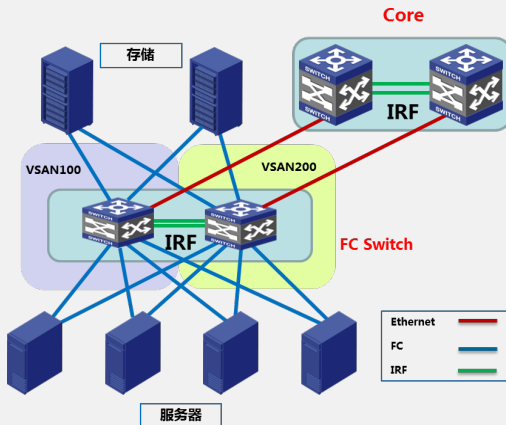


FC交换机开局经验指导

FC (Fibre Channel, 光纤通道) 协议是SAN (Storage Area Networks, 存储区域网络) 中使用的一种数据传输协议。

在FC SAN中, 服务器、FC交换机和磁盘设备都需要支持FC协议。服务器和磁盘设备都被称之为节点设备 (Node), 是数据发送和接收的实体; FC交换机作为中间传输设备提供数据转发和网络控制功能。

1. 组网图



2台S5820V2-52QF-U做IRF堆叠, 服务器和存储的两条FC链路分别连接到堆叠的两个成员设备上。将SAN网络划分为2个VSAN, 分别为VSAN100和VSAN200, 堆叠成员1的FC端口加入VSAN100, 堆叠成员2的FC端口加入VSAN200。两条上行链路连接核心设备用于S5820V2-52QF-U交换机的远程网管。

2. 配置

2.1 配置IRF堆叠

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2.2 配置设备工作模式为高级模式:

```
system-view
[FC] system-working-mode advance
[FC] save
[FC] quit
reboot
```

注: 缺省情况下, 设备工作在标准模式, 要使修改的工作模式生效, 必须重启设备。

2.3 配置FCoE模式为FCF模式:

```
system-view
[FC] fcoe-mode fcf
```

注: 缺省情况下, 交换机工作在非FCoE模式, 即不具备任何FC和FCoE相关的功能, 配置FC和FCoE功能时, 必须先配置交换机的FCoE模式。

2.4 创建VSAN 100和VSAN 200:

```
[FC] vsan 100
[FC-vsan100] domain-id 1 static //配置域ID为1
[FC-vsan100] zone default-zone permit //配置允许默认Zone内的成员互相访问
[FC-vsan100] quit
[FC] vsan 200
[FC-vsan200] domain-id 2 static //配置域ID为2
[FC-vsan200] zone default-zone permit //配置允许默认Zone内的成员互相访问
[FC-vsan100] quit
```

注: 初始情况下, 只存在默认VSAN (VSAN 1)。用户不能创建或删除默认VSAN。

2.5 创建VLAN, 开启VLAN的FCoE功能, 并将其与VSAN进行映射:

```
[FC] vlan 100
[FC-vlan100] fcoe enable vsan 100 //开启VLAN 100的FCoE功能, 并将其与VSAN 100进行映射
[FC-vlan100] quit
[FC] vlan 200
```

```
[FC-vlan200] fcoe enable vsan 200 //开启VLAN 200的FCoE功能，并将其与VSAN 200进行映射
```

```
[FC-vlan200] quit
```

2.6 配置FC端口：

```
[FC] interface ten-gigabitethernet 1/0/1
```

```
[FC -Ten-GigabitEthernet1/0/1] port-type fc //将二层以太网接口切换为FC接口
```

```
[FC -Fc1/0/1] fc mode f //配置FC接口的模式为F模式
```

```
[FC -Fc1/0/1] port access vsan 100 //将FC1/0/1以Access方式加入VSAN 100
```

```
[FC -Fc1/0/1] qos trust dot1p //配置FC1/0/1接口信任报文自带的802.1p优先级
```

```
[FC -Fc1/0/1] quit
```

堆叠成员1上的其它FC端口配置与1/0/1口相同

```
[FC] interface ten-gigabitethernet 2/0/1
```

```
[FC -Ten-GigabitEthernet2/0/1] port-type fc //将二层以太网接口切换为FC接口
```

```
[FC -Fc2/0/1] fc mode f //配置FC接口的模式为F模式
```

```
[FC -Fc2/0/1] port access vsan 200 //将FC2/0/1以Access方式加入VSAN 200
```

```
[FC -Fc2/0/1] qos trust dot1p //配置FC2/0/1接口信任报文自带的802.1p优先级
```

```
[FC -Fc2/0/1] quit
```

堆叠成员2上的其它FC端口配置与2/0/1口相同

3. 验证

```
< FC>display fc login //显示交换机上节点注册的相关信息
```

Interface	VSAN	FCID	Node WWN	Port WWN
Fc1/0/1	100	0x010009	50:01:43:80:24:28:24:25	50:01:43:80:24:28:24:24
Fc1/0/2	100	0x010000	50:01:43:80:24:29:d3:25	50:01:43:80:24:29:d3:24
Fc1/0/3	100	0x010001	50:01:43:80:24:29:ce:a5	50:01:43:80:24:29:ce:a4
Fc1/0/4	100	0x010002	50:01:43:80:24:29:cc:f9	50:01:43:80:24:29:cc:f8
Fc1/0/5	100	0x010003	50:01:43:80:24:29:d1:b9	50:01:43:80:24:29:d1:b8
Fc1/0/6	100	0x010004	50:01:43:80:24:29:d3:ad	50:01:43:80:24:29:d3:ac
Fc1/0/7	100	0x010014	50:01:43:80:24:29:d6:2d	50:01:43:80:24:29:d6:2c
Fc1/0/8	100	0x010033	50:01:43:80:24:29:d4:71	50:01:43:80:24:29:d4:70
Fc1/0/9	100	0x010034	50:01:43:80:24:29:d0:71	50:01:43:80:24:29:d0:70
Fc1/0/10	100	0x010015	50:01:43:80:24:29:d2:e9	50:01:43:80:24:29:d2:e8
Fc1/0/11	100	0x010016	50:01:43:80:24:29:d2:e5	50:01:43:80:24:29:d2:e4
Fc1/0/12	100	0x010031	50:01:43:80:24:29:d8:f9	50:01:43:80:24:29:d8:f8
Fc1/0/13	100	0x010025	50:01:43:80:24:29:d3:51	50:01:43:80:24:29:d3:50
Fc1/0/14	100	0x010019	50:01:43:80:24:29:d1:9d	50:01:43:80:24:29:d1:9c
Fc1/0/15	100	0x010018	50:01:43:80:24:29:d1:29	50:01:43:80:24:29:d1:28
Fc1/0/16	100	0x010028	50:01:43:80:24:29:d0:95	50:01:43:80:24:29:d0:94
Fc1/0/17	100	0x01001b	50:01:43:80:24:29:d4:75	50:01:43:80:24:29:d4:74
Fc1/0/18	100	0x01001c	20:00:00:24:ff:0b:c1:9c	21:00:00:24:ff:0b:c1:9c
Fc1/0/19	100	0x01001d	20:00:00:24:ff:0b:c2:30	21:00:00:24:ff:0b:c2:30
Fc1/0/20	100	0x010032	20:00:00:24:ff:0b:c2:15	21:00:00:24:ff:0b:c2:15
Fc1/0/21	100	0x01001e	50:01:43:80:24:29:d2:09	50:01:43:80:24:29:d2:08
Fc1/0/22	100	0x010030	50:01:43:80:24:29:d1:f1	50:01:43:80:24:29:d1:f0
Fc1/0/23	100	0x01002f	50:01:43:80:24:28:22:31	50:01:43:80:24:28:22:30
Fc1/0/29	100	0x010005	2f:f7:00:02:ac:00:90:18	21:11:00:02:ac:00:90:18
Fc1/0/30	100	0x010006	2f:f7:00:02:ac:00:90:18	20:11:00:02:ac:00:90:18
Fc1/0/33	100	0x010007	2f:f7:00:02:ac:00:66:df	21:12:00:02:ac:00:66:df
Fc1/0/34	100	0x010008	2f:f7:00:02:ac:00:66:df	20:11:00:02:ac:00:66:df
Fc2/0/1	200	0x020000	50:01:43:80:24:28:24:27	50:01:43:80:24:28:24:26
Fc2/0/2	200	0x020001	50:01:43:80:24:29:d3:27	50:01:43:80:24:29:d3:26
Fc2/0/3	200	0x020002	50:01:43:80:24:29:ce:a7	50:01:43:80:24:29:ce:a6
Fc2/0/4	200	0x020003	50:01:43:80:24:29:cc:fb	50:01:43:80:24:29:cc:fa
Fc2/0/5	200	0x020004	50:01:43:80:24:29:d1:bb	50:01:43:80:24:29:d1:ba
Fc2/0/6	200	0x020005	50:01:43:80:24:29:d3:af	50:01:43:80:24:29:d3:ae
Fc2/0/7	200	0x02000a	50:01:43:80:24:29:d6:2f	50:01:43:80:24:29:d6:2e
Fc2/0/8	200	0x02000b	50:01:43:80:24:29:d4:73	50:01:43:80:24:29:d4:72
Fc2/0/9	200	0x02000c	50:01:43:80:24:29:d0:73	50:01:43:80:24:29:d0:72
Fc2/0/10	200	0x02000d	50:01:43:80:24:29:d2:eb	50:01:43:80:24:29:d2:ea
Fc2/0/11	200	0x02000e	50:01:43:80:24:29:d2:e7	50:01:43:80:24:29:d2:e6
Fc2/0/12	200	0x02000f	50:01:43:80:24:29:d8:fb	50:01:43:80:24:29:d8:fa
Fc2/0/13	200	0x02001c	50:01:43:80:24:29:d3:53	50:01:43:80:24:29:d3:52
Fc2/0/14	200	0x020011	50:01:43:80:24:29:d1:9f	50:01:43:80:24:29:d1:9e
Fc2/0/15	200	0x020012	50:01:43:80:24:29:d1:2b	50:01:43:80:24:29:d1:2a
Fc2/0/16	200	0x02001d	50:01:43:80:24:29:d0:97	50:01:43:80:24:29:d0:96

```

Fc2/0/17 200 0x020014 50:01:43:80:24:29:d4:77 50:01:43:80:24:29:d4:76
Fc2/0/18 200 0x020015 20:00:00:24:ff:0b:c1:31 21:00:00:24:ff:0b:c1:31
Fc2/0/19 200 0x020016 20:00:00:24:ff:0b:c1:a9 21:00:00:24:ff:0b:c1:a9
Fc2/0/20 200 0x020017 20:00:00:24:ff:0b:c1:97 21:00:00:24:ff:0b:c1:97
Fc2/0/21 200 0x020018 50:01:43:80:24:29:d2:0b 50:01:43:80:24:29:d2:0a
Fc2/0/22 200 0x020019 50:01:43:80:24:29:d1:f3 50:01:43:80:24:29:d1:f2
Fc2/0/23 200 0x02001a 50:01:43:80:24:28:22:33 50:01:43:80:24:28:22:32
Fc2/0/29 200 0x020006 2f:f7:00:02:ac:00:90:18 21:12:00:02:ac:00:90:18
Fc2/0/30 200 0x020007 2f:f7:00:02:ac:00:90:18 20:12:00:02:ac:00:90:18
Fc2/0/33 200 0x020008 2f:f7:00:02:ac:00:66:df 21:11:00:02:ac:00:66:df
Fc2/0/34 200 0x020009 2f:f7:00:02:ac:00:66:df 20:12:00:02:ac:00:66:df

```

```
display fc name-service database //显示名称服务数据库信息
```

```
VSAN: 100
```

FCID	Type	PWWN(vendor)	FC4-type:feature
0x010000	0x01(N)	50:01:43:80:24:29:d3:24	SCSI-FCP:Initiator
0x010001	0x01(N)	50:01:43:80:24:29:ce:a4	SCSI-FCP:Initiator
0x010002	0x01(N)	50:01:43:80:24:29:cc:f8	SCSI-FCP:Initiator
0x010003	0x01(N)	50:01:43:80:24:29:d1:b8	SCSI-FCP:Initiator
0x010004	0x01(N)	50:01:43:80:24:29:d3:ac	SCSI-FCP:Initiator
0x010005	0x01(N)	21:11:00:02:ac:00:90:18	SCSI-FCP:Target
0x010006	0x01(N)	20:11:00:02:ac:00:90:18	SCSI-FCP:Target
0x010007	0x01(N)	21:12:00:02:ac:00:66:df	SCSI-FCP:Target
0x010008	0x01(N)	20:11:00:02:ac:00:66:df	SCSI-FCP:Target
0x010009	0x01(N)	50:01:43:80:24:28:24:24	SCSI-FCP:Initiator
0x010014	0x01(N)	50:01:43:80:24:29:d6:2c	SCSI-FCP:Initiator
0x010015	0x01(N)	50:01:43:80:24:29:d2:e8	SCSI-FCP:Initiator
0x010016	0x01(N)	50:01:43:80:24:29:d2:e4	SCSI-FCP:Initiator
0x010018	0x01(N)	50:01:43:80:24:29:d1:28	SCSI-FCP:Initiator
0x010019	0x01(N)	50:01:43:80:24:29:d1:9c	SCSI-FCP:Initiator
0x01001b	0x01(N)	50:01:43:80:24:29:d4:74	SCSI-FCP:Initiator
0x01001c	0x01(N)	21:00:00:24:ff:0b:c1:9c	SCSI-FCP:Initiator
0x01001d	0x01(N)	21:00:00:24:ff:0b:c2:30	SCSI-FCP:Initiator
0x01001e	0x01(N)	50:01:43:80:24:29:d2:08	SCSI-FCP:Initiator
0x010025	0x01(N)	50:01:43:80:24:29:d3:50	SCSI-FCP:Initiator
0x010028	0x01(N)	50:01:43:80:24:29:d0:94	SCSI-FCP:Initiator
0x01002f	0x01(N)	50:01:43:80:24:28:22:30	SCSI-FCP:Initiator
0x010030	0x01(N)	50:01:43:80:24:29:d1:f0	SCSI-FCP:Initiator
0x010031	0x01(N)	50:01:43:80:24:29:d8:f8	SCSI-FCP:Initiator
0x010032	0x01(N)	21:00:00:24:ff:0b:c2:15	SCSI-FCP:Initiator
0x010033	0x01(N)	50:01:43:80:24:29:d4:70	SCSI-FCP:Initiator
0x010034	0x01(N)	50:01:43:80:24:29:d0:70	SCSI-FCP:Initiator

```
VSAN: 200
```

FCID	Type	PWWN(vendor)	FC4-type:feature
0x020000	0x01(N)	50:01:43:80:24:28:24:26	SCSI-FCP:Initiator
0x020001	0x01(N)	50:01:43:80:24:29:d3:26	SCSI-FCP:Initiator
0x020002	0x01(N)	50:01:43:80:24:29:ce:a6	SCSI-FCP:Initiator
0x020003	0x01(N)	50:01:43:80:24:29:cc:fa	SCSI-FCP:Initiator
0x020004	0x01(N)	50:01:43:80:24:29:d1:ba	SCSI-FCP:Initiator
0x020005	0x01(N)	50:01:43:80:24:29:d3:ae	SCSI-FCP:Initiator
0x020006	0x01(N)	21:12:00:02:ac:00:90:18	SCSI-FCP:Target
0x020007	0x01(N)	20:12:00:02:ac:00:90:18	SCSI-FCP:Target
0x020008	0x01(N)	21:11:00:02:ac:00:66:df	SCSI-FCP:Target
0x020009	0x01(N)	20:12:00:02:ac:00:66:df	SCSI-FCP:Target
0x02000a	0x01(N)	50:01:43:80:24:29:d6:2e	SCSI-FCP:Initiator
0x02000b	0x01(N)	50:01:43:80:24:29:d4:72	SCSI-FCP:Initiator
0x02000c	0x01(N)	50:01:43:80:24:29:d0:72	SCSI-FCP:Initiator
0x02000d	0x01(N)	50:01:43:80:24:29:d2:ea	SCSI-FCP:Initiator
0x02000e	0x01(N)	50:01:43:80:24:29:d2:e6	SCSI-FCP:Initiator
0x02000f	0x01(N)	50:01:43:80:24:29:d8:fa	SCSI-FCP:Initiator
0x020011	0x01(N)	50:01:43:80:24:29:d1:9e	SCSI-FCP:Initiator
0x020012	0x01(N)	50:01:43:80:24:29:d1:2a	SCSI-FCP:Initiator
0x020014	0x01(N)	50:01:43:80:24:29:d4:76	SCSI-FCP:Initiator

0x020015 0x01(N)	21:00:00:24:ff:0b:c1:31	SCSI-FCP:Initiator
0x020016 0x01(N)	21:00:00:24:ff:0b:c1:a9	SCSI-FCP:Initiator
0x020017 0x01(N)	21:00:00:24:ff:0b:c1:97	SCSI-FCP:Initiator
0x020018 0x01(N)	50:01:43:80:24:29:d2:0a	SCSI-FCP:Initiator
0x020019 0x01(N)	50:01:43:80:24:29:d1:f2	SCSI-FCP:Initiator
0x02001a 0x01(N)	50:01:43:80:24:28:22:32	SCSI-FCP:Initiator
0x02001c 0x01(N)	50:01:43:80:24:29:d3:52	SCSI-FCP:Initiator
0x02001d 0x01(N)	50:01:43:80:24:29:d0:96	SCSI-FCP:Initiator