

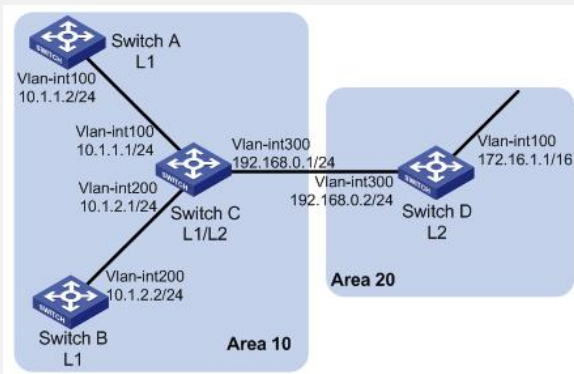
H3C S3500-EA IPv4 IS-IS基本配置

一、组网需求:

如下图所示, Switch A、Switch B、Switch C和Switch D属于同一自治系统, 要求他们之间通过IS-IS协议达到IP网络互连的目的。

其中, Switch A和Switch B为Level-1交换机, Switch D为Level-2交换机, Switch C作为Level-1-2交换机将两个区域相连。Switch A、Switch B和Switch C的区域号为10, Switch D的区域号为20。

二、组网图:



三、配置步骤:

(1) 配置各接口的IPv4地址(略)

(2) 配置IS-IS

配置Switch A。

```
<SwitchA> system-view
[SwitchA] isis 1
[SwitchA-isis-1] is-level level-1
[SwitchA-isis-1] network-entity 10.0000.0000.0001.00
[SwitchA-isis-1] quit
[SwitchA] interface vlan-interface 100
[SwitchA-Vlan-interface100] isis enable 1
[SwitchA-Vlan-interface100] quit
```

配置Switch B。

```
<SwitchB> system-view
[SwitchB] isis 1
[SwitchB-isis-1] is-level level-1
[SwitchB-isis-1] network-entity 10.0000.0000.0002.00
[SwitchB-isis-1] quit
[SwitchB] interface vlan-interface 200
[SwitchB-Vlan-interface200] isis enable 1
[SwitchB-Vlan-interface200] quit
```

配置Switch C。

```
<SwitchC> system-view
[SwitchC] isis 1
[SwitchC-isis-1] network-entity 10.0000.0000.0003.00
[SwitchC-isis-1] quit
[SwitchC] interface vlan-interface 100
[SwitchC-Vlan-interface100] isis enable 1
[SwitchC-Vlan-interface100] quit
[SwitchC] interface vlan-interface 200
[SwitchC-Vlan-interface200] isis enable 1
[SwitchC-Vlan-interface200] quit
[SwitchC] interface vlan-interface 300
[SwitchC-Vlan-interface300] isis enable 1
[SwitchC-Vlan-interface300] quit
```

配置Switch D。

```
<SwitchD> system-view
```

```
[SwitchD] isis 1
[SwitchD-isis-1] is-level level-2
[SwitchD-isis-1] network-entity 20.0000.0000.0004.00
[SwitchD-isis-1] quit
[SwitchD] interface vlan-interface 100
[SwitchD-Vlan-interface100] isis enable 1
[SwitchD-Vlan-interface100] quit
[SwitchD] interface vlan-interface 300
[SwitchD-Vlan-interface300] isis enable 1
[SwitchD-Vlan-interface300] quit
```

(3) 验证配置结果

显示各交换机的IS-IS LSDB信息，查看LSP是否完整。

```
[SwitchA] display isis lsdb
      Database information for ISIS(1)
      -----
      Level-1 Link State Database
LSPID      Seq Num    Checksum  Holdtime  Length ATT/P/OL
-----
0000.0000.0001.00-00* 0x00000004 0xdf5e 1096    68    0/0/0
0000.0000.0002.00-00 0x00000004 0xee4d 1102    68    0/0/0
0000.0000.0002.01-00 0x00000001 0xdaaf 1102    55    0/0/0
0000.0000.0003.00-00 0x00000009 0xcaa3 1161    111   1/0/0
0000.0000.0003.01-00 0x00000001 0xadda 1112    55    0/0/0
*-Self LSP, +-Self LSP(Extended), ATT-Attached, P-Partition, OL-Overload
```

```
[SwitchB] display isis lsdb
      Database information for ISIS(1)
      -----
      Level-1 Link State Database
LSPID      Seq Num    Checksum  Holdtime  Length ATT/P/OL
-----
0000.0000.0001.00-00 0x00000006 0xdb60 988     68    0/0/0
0000.0000.0002.00-00* 0x00000008 0xe651 1189    68    0/0/0
0000.0000.0002.01-00* 0x00000005 0xd2b3 1188    55    0/0/0
0000.0000.0003.00-00 0x00000014 0x194a 1190    111   1/0/0
0000.0000.0003.01-00 0x00000002 0xabdb 995     55    0/0/0
*-Self LSP, +-Self LSP(Extended), ATT-Attached, P-Partition, OL-Overload
```

```
[SwitchC] display isis lsdb
      Database information for ISIS(1)
      -----
      Level-1 Link State Database
LSPID      Seq Num    Checksum  Holdtime  Length ATT/P/OL
-----
0000.0000.0001.00-00 0x00000006 0xdb60 847     68    0/0/0
0000.0000.0002.00-00 0x00000008 0xe651 1053    68    0/0/0
0000.0000.0002.01-00 0x00000005 0xd2b3 1052    55    0/0/0
0000.0000.0003.00-00* 0x00000014 0x194a 1051    111   1/0/0
0000.0000.0003.01-00* 0x00000002 0xabdb 854     55    0/0/0
*-Self LSP, +-Self LSP(Extended), ATT-Attached, P-Partition, OL-Overload
```

```
      Level-2 Link State Database
LSPID      Seq Num    Checksum  Holdtime  Length ATT/P/OL
-----
0000.0000.0003.00-00* 0x00000012 0xc93c 842     100   0/0/0
0000.0000.0004.00-00 0x00000026 0x331 1173    84    0/0/0
0000.0000.0004.01-00 0x00000001 0xee95 668     55    0/0/0
*-Self LSP, +-Self LSP(Extended), ATT-Attached, P-Partition, OL-Overload
```

```
[SwitchD] display isis lsdb
      Database information for ISIS(1)
      -----
      Level-2 Link State Database
LSPID      Seq Num    Checksum  Holdtime  Length ATT/P/OL
-----
0000.0000.0003.00-00 0x00000013 0xc73d 1003    100   0/0/0
0000.0000.0004.00-00* 0x0000003c 0xd647 1194    84    0/0/0
0000.0000.0004.01-00* 0x00000002 0xec96 1007    55    0/0/0
```

*-Self LSP, +-Self LSP(Extended), ATT-Attached, P-Partition, OL-Overload
显示各交换机的IS-IS路由信息。Level-1交换机的路由表中应该有一条缺省路由，且下一跳为Level-1-2交换机，Level-2交换机的路由表中应该有所有Level-1和Level-2的路由。

[SwitchA] display isis route

Route information for ISIS(1)

ISIS(1) IPv4 Level-1 Forwarding Table

IPV4 Destination IntCost ExtCost ExitInterface NextHop Flags

10.1.1.0/24 10 NULL Vlan100 Direct D/L/-
10.1.2.0/24 20 NULL Vlan100 10.1.1.1 R/-/
192.168.0.0/24 20 NULL Vlan100 10.1.1.1 R/-/
0.0.0.0/0 10 NULL Vlan100 10.1.1.1 R/-/

Flags: D-Direct, R-Added to RM, L-Advertised in LSPs, U-Up/Down Bit Set

[SwitchC] display isis route

Route information for ISIS(1)

ISIS(1) IPv4 Level-1 Forwarding Table

IPV4 Destination IntCost ExtCost ExitInterface NextHop Flags

192.168.0.0/24 10 NULL Vlan300 Direct D/L/-
10.1.1.0/24 10 NULL Vlan100 Direct D/L/-
10.1.2.0/24 10 NULL Vlan200 Direct D/L/-

Flags: D-Direct, R-Added to RM, L-Advertised in LSPs, U-Up/Down Bit Set

ISIS(1) IPv4 Level-2 Forwarding Table

IPV4 Destination IntCost ExtCost ExitInterface NextHop Flags

192.168.0.0/24 10 NULL Vlan300 Direct D/L/-
10.1.1.0/24 10 NULL Vlan100 Direct D/L/-
10.1.2.0/24 10 NULL Vlan200 Direct D/L/-
172.16.0.0/16 20 NULL Vlan300 192.168.0.2 R/-/

Flags: D-Direct, R-Added to RM, L-Advertised in LSPs, U-Up/Down Bit Set

[SwitchD] display isis route

Route information for ISIS(1)

ISIS(1) IPv4 Level-2 Forwarding Table

IPV4 Destination IntCost ExtCost ExitInterface NextHop Flags

192.168.0.0/24 10 NULL Vlan300 Direct D/L/-
10.1.1.0/24 20 NULL Vlan300 192.168.0.1 R/-/
10.1.2.0/24 20 NULL Vlan300 192.168.0.1 R/-/
172.16.0.0/16 10 NULL Vlan100 Direct D/L/-

Flags: D-Direct, R-Added to RM, L-Advertised in LSPs, U-Up/Down Bit Set

四、配置关键点：

无。