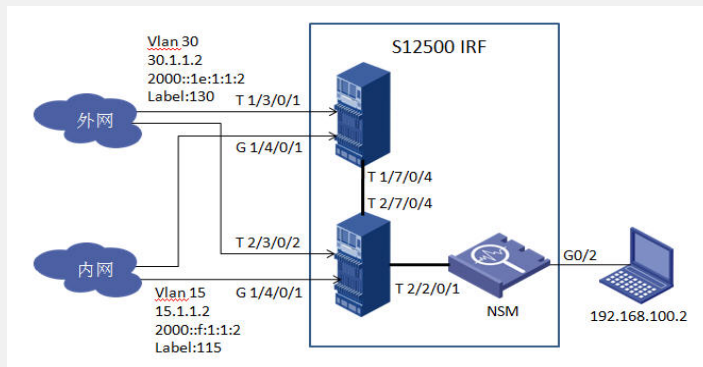


### S12500 IRF模式下NSM的典型配置案例

#### 一、业务需求

- 1、对端口的出入流量进行框内、跨框NSM;
- 2、覆盖: IPv4单播、IPv4组播、IPv6单播、IPv6组播、MPLS;

#### 二、组网图:



#### 三、配置步骤:

S12500上正常配置业务;

由于涉及跨框镜像, S12500 NSM内联口需要允许VLAN 1通过;

NSM板进行Netstream相关配置;

流镜像方式将125业务口报文镜像到框内、框间NSM内联口处理;

##### 1、S12500基本配置

###### ## IPv4单播相关配置

```
[S12500]interface LoopBack 0
[S12500-LoopBack0]ip address 1.1.1.1 32
[S12500-LoopBack0]quit
[S12500]inter vlan 15
[S12500-Vlan-interface15]ip address 15.1.1.1 24
[S12500]inter vlan 30
[S12500-Vlan-interface30]ip address 30.1.1.1 24
[S12500-Vlan-interface30]quit
```

###### ## IPv4组播相关配置

```
[S12500]multicast routing-enable
[S12500]pim
[S12500-pim]c-bsr LoopBack0
[S12500-pim]c-rp LoopBack0
[S12500-pim]inter vlan 30
[S12500-Vlan-interface30]pim sm
[S12500-Vlan-interface30]inter vlan 15
[S12500-Vlan-interface15]igmp enable
[S12500-Vlan-interface15]quit
```

###### ## IPv6单播相关配置

```
[S12500]interface LoopBack 0
[S12500-LoopBack0]ipv6 address 2000::1.1.1.1 128
[S12500-LoopBack0]quit
```

```
[S12500]ipv6
[S12500]inter vlan 15
[S12500-Vlan-interface15]ipv6 address 2000::f.1.1.1 112
[S12500]inter vlan 30
[S12500-Vlan-interface30]ipv6 address 2000::1e.1.1.1 112
[S12500-Vlan-interface30]quit
## IPv6组播相关配置
[S12500]multicast ipv6 routing-enable
[S12500]pim ipv6
[S12500-pim6]c-rp 2000::1:1:1:1
[S12500-pim6]c-bsr 2000::1:1:1:1
[S12500-pim]inter vlan 30
[S12500-Vlan-interface30]pim ipv6 sm
[S12500-Vlan-interface30]inter vlan 15
[S12500-Vlan-interface15]mld enable
[S12500-Vlan-interface15]quit
## MPLS相关配置
[S12500]mpls lsr-id 1.1.1.1
[S12500]mpls
[S12500]inter vlan 30
[S12500-Vlan-interface30]mpls
[S12500-Vlan-interface30]inter vlan 15
[S12500-Vlan-interface15]mpls
[S12500-Vlan-interface15]quit
[S12500]static-lsp transit in->out incoming-interface Vlan-interface15 in-label 115 nex
thop 30.1.1.2 out-label 130
[S12500]static-lsp transit out->in incoming-interface Vlan-interface30 in-label 130 nex
thop 15.1.1.2 out-label 115
2、OAA相关配置
## 使能acsei server
[S12500]acsei server enable
## 配置NSM内联口允许vlan 1通过（跨框镜像的限制），不允许其它vlan通过，避免报
文二层广播到前插板
[S12500]inter te 2/2/0/1
[S12500-Ten-GigabitEthernet2/2/0/1]port link-mode bridge
[S12500-Ten-GigabitEthernet2/2/0/1]port link-type trunk
[S12500-Ten-GigabitEthernet2/2/0/1]quit
3、Netstream流分类方式配置
IPv4流分类配置
## 配置acl，匹配ipv4单播、组播流
[S12500]acl number 3101
[S12500-acl-adv-3101]rule 0 permit ip source 15.1.1.2 0.0.0.255 destination 30.1.1.2
0.0.0.255
[S12500-acl-adv-3101]acl number 3201
[S12500-acl-adv-3201]rule 0 permit ip source 30.1.1.2 0.0.0.255 destination 15.1.1.2
0.0.0.255
[S12500-acl-adv-3201]acl number 3301
[S12500-acl-adv-3301]rule 0 permit ip source 30.1.1.2 0.0.0.255 destination 225.0.0.
1 0.0.0.255
```

```
[S12500-acl-adv-3301]quit
## 配置流分类
[S12500]traffic classifier nsm-to-internet-ipv4-uni
[S12500-classifier-nsm-to-internet-ipv4-uni]if-match acl 3101
[S12500-classifier-nsm-to-internet-ipv4-uni]traffic classifier nsm-from-internet-ipv4-uni
[S12500-classifier-nsm-from-internet-ipv4-uni]if-match acl 3201
[S12500-classifier-nsm-from-internet-ipv4-uni]traffic classifier nsm-from-internet-ipv4-mul
[S12500-classifier-nsm-from-internet-ipv4-mul]if-match acl 3301
[S12500-classifier-nsm-from-internet-ipv4-mul]quit
IPv6流分类方式配置
## 配置acl
[S12500]acl ipv6 number 3101
[S12500-acl6-adv-3101]rule 0 permit ipv6 source 2000::F:1:1:0 112 destination 2000::1E:1:1:0 112
[S12500-acl6-adv-3101]acl ipv6 number 3201
[S12500-acl6-adv-3201]rule 0 permit ipv6 source 2000::1E:1:1:0 112 destination 2000::F:1:1:0 112
[S12500-acl6-adv-3201]acl ipv6 number 3301
[S12500-acl6-adv-3301]rule 0 permit ipv6 source 2000::1E:1:1:0 112 destination FF1E::1 112
[S12500-acl6-adv-3301]quit
## 配置流分类
[S12500]traffic classifier nsm-to-internet-ipv6-uni
[S12500-classifier-nsm-to-internet-ipv6-uni]if-match acl ipv6 3101
[S12500-classifier-nsm-to-internet-ipv6-uni]traffic classifier nsm-from-internet-ipv6-uni
[S12500-classifier-nsm-from-internet-ipv6-uni]if-match acl ipv6 3201
[S12500-classifier-nsm-from-internet-ipv6-uni]traffic classifier nsm-from-internet-ipv6-mul
[S12500-classifier-nsm-from-internet-ipv6-mul]if-match acl ipv6 3301
[S12500-classifier-nsm-from-internet-ipv6-mul]quit
MPLS流分类方式配置
## 配置流分类
[S12500]traffic classifier nsm-to-internet-mpls
[S12500-classifier-nsm-to-internet-mpls]if-match mpls-label 115
[S12500-classifier-nsm-to-internet-mpls]traffic classifier cl nsm-from-internet-mpls
[S12500-classifier-nsm-from-internet-mpls]if-match mpls-label 130
[S12500-classifier-nsm-from-internet-mpls]quit
流动作配置
## 配置流动作
[S12500]traffic behavior mir-to-nsm-irf
[S12500-behavior-mir-to-nsm-irf]mirror-to interface Ten-GigabitEthernet2/2/0/1
[S12500-behavior-mir-to-nsm-irf]quit
流镜像策略配置
## 配置qos策略
[S12500]qos policy nsm-to-internet
[S12500-qospolicy-nsm-to-internet]classifier nsm-to-internet-ipv4-uni behavior mir-to-nsm-irf
```

```

[S12500-qospolicy-nsm-to-internet]classifier nsm-to-internet-ipv6-uni behavior mir-to-
nsm-irf
[S12500-qospolicy-nsm-to-internet]classifier nsm-to-internet-mpls behavior mir-to-ns
m-irf
[S12500-qospolicy-nsm-to-internet]qos policy nsm-from-internet
[S12500-qospolicy-nsm-from-internet]classifier nsm-from-internet-ipv4-uni behavior
mir-to-nsm-irf
[S12500-qospolicy-nsm-from-internet]classifier nsm-from-internet-ipv4-mul behavior
mir-to-nsm-irf
[S12500-qospolicy-nsm-from-internet]classifier nsm-from-internet-ipv6-uni behavior
mir-to-nsm-irf
[S12500-qospolicy-nsm-from-internet]classifier nsm-from-internet-ipv6-mul behavior
mir-to-nsm-irf
[S12500-qospolicy-nsm-from-internet]classifier nsm-from-internet-mpls behavior mir-t
o-nsm-irf
[S12500-qospolicy-nsm-from-internet]quit
## 端口上应用qos策略
[S12500]inter g1/4/0/1
[S12500-GigabitEthernet1/4/0/1]qos apply policy nsm-to-internet inbound
[S12500-GigabitEthernet1/4/0/1]inter g2/4/0/2
[S12500-GigabitEthernet2/4/0/2]qos apply policy nsm-to-internet inbound
[S12500-GigabitEthernet2/4/0/2]inter te1/3/0/1
[S12500-Ten-GigabitEthernet1/3/0/1]qos apply policy nsm-from-internet inbound
[S12500-Ten-GigabitEthernet2/4/0/2]inter te2/3/0/2
[S12500-Ten-GigabitEthernet2/3/0/2]qos apply policy nsm-from-internet inbound
[S12500-Ten-GigabitEthernet2/3/0/2]quit
4、NSM单板配置
配置管理口地址
## 配置系统名称
[H3C]sysname NSM
## 使能telnet server
[NSM]telnet server enable
## 配置管理口ip地址
[NSM]interface GigabitEthernet 0/1
[NSM-GigabitEthernet0/1]ip address 192.168.0.16 24
[NSM-GigabitEthernet0/1]quit
## 使能telnet口登录权限
[NSM]user-interface vty 0 4
[NSM-ui-vty0-4]authentication-mode none
[NSM-ui-vty0-4]user privilege level 3
[NSM-ui-vty0-4]quit
配置INLINE转发组
## 配置黑洞类型INLINE 转发组1
[NSM]inline-interfaces 1 blackhole
配置与设备互连的内联口使能acsei client
## 内联口配置
[NSM]inter te 0/0
[NSM-Ten-GigabitEthernet0/0]port link-mode bridge
[NSM-Ten-GigabitEthernet0/0]port link-type trunk

```

```
[NSM-Ten-GigabitEthernet0/0]acsei-client enable
[NSM-Ten-GigabitEthernet0/0]port inline-interfaces 1
[NSM-Ten-GigabitEthernet0/0]quit
## 此时，125上可以看到NSM单板的信息
[S12500]disp acsei client info
Total Client Number: 1
Client ID: 1
Client Description: SecBlade NS
Hardware: A.0
System Software: COMWAREV500R002B81D001
Application Software: V300R001B08D031
CPU: RMI XLR732 1000MHz
PCB Version: A.0
CPLD Version: 1.0
Bootrom Version: Basic BootRom Version:1.28,Extend BootRom Version:1.19
CF card: 247M Bytes Compact Flash Storage Device
Memory: 2048M Bytes DDR2 SDRAM Memory
Harddisk:
[S12500]
业务配置
配置与设备互连的内联口
## 内联口配置，使能IPv4、IPv6 netstream
[NSM]inter te 0/0
[NSM-Ten-GigabitEthernet0/0]port trunk permit vlan all
[NSM-Ten-GigabitEthernet0/0]ip netstream inbound
[NSM-Ten-GigabitEthernet0/0]ipv6 netstream inbound
[NSM-Ten-GigabitEthernet0/0]quit
配置NSM主机
## 配置NSM IPv4主机、时间
[NSM]ip netstream timeout active 1
[NSM]ip netstream timeout inactive 10
[NSM]ip netstream export host 192.168.100.2 30014
## 配置NSM IPv6主机、时间
[NSM]ipv6 netstream timeout active 1
[NSM]ipv6 netstream timeout inactive 10
[NSM]ipv6 netstream export host 192.168.100.2 30014
## 配置NSM统计MPLS
[NSM]ip netstream mpls
[NSM]ip netstream export version 9
## 配置连接NSM主机的端口地址
[NSM]inter g0/2
[NSM-GigabitEthernet0/2]port link-mode route
[NSM-GigabitEthernet0/2]ip address 192.168.100.1 255.255.255.0
[NSM-GigabitEthernet0/2]quit
## 配置SNMP
[NSM]snmp-agent
[NSM]snmp-agent community read public
```

```
[NSM]snmp-agent community write private
```

```
[NSM]snmp-agent sys-info version all
```

#### 四、配置关键点：

- 1、S12500堆叠时，不支持ACFP动态引流，只能用MQC方式引流；
- 2、S12500堆叠时，MQC跨框时只能重定向到OAA插卡的内联口；
- 3、S12500堆叠口最好是10GE端口；