V7防火墙ipsec野蛮模式web配置（一对多模式）

IPSec VPN 孙兆强 2021-02-27 发表

组网及说明

总部公网地址172.16.0.1，分支无论地址是否固定。两边私网地址用loopback地址替代。

配置步骤

地址、安全域及安全策略需自行配置放通

一、总部配置

新建ike提议

网络》VPN》ipsec》IKE提议》新建，选择相应的认证加密等参数

认证加密等参数相同的ike提议建议只配置一个，因为参数相同设备只会去匹配优先级最高的那个ike提议，优先级数值越小越优先。

新建ipsec策略

网络》VPN》ipsec》策略》新建，新建相应的ipsec策略等参数

配置ipsec策略的名称，选择接口及地址，总部设备角色选择中心节点。选择中心节点设备会下发模板方式的配置。模板方式的总部不需要配置acl，由分支配置acl来跟总部协商自动出保护的数据流。

IKE策略选择野蛮模式，IKE提议选择之前配置的ike，本端ID选择ipv4地址。

注意：本端ID一定要选择ipv4地址

Ipsec参数选择esp认证加密算法，其他保持默认。

总部采用模板方式无法指定分支的FQDN，总部默认下发配置

```
ike profile zongbu_IPv4_1
 keychain zongbu_IPv4_1
 exchange-mode aggressive
 local-identity address 172.16.0.1
 match remote identity address 0.0.0.0 0.0.0.0
 match local address GigabitEthernet1/0/0
 proposal 10
```

指定对端地址为全0，所以分支只能配置身份识别local-identity为地址，又因为大部分采用野蛮模式的分支地址是不固定的，所以分支这里本端ID只能留空，默认local-identity为地址。否则两端因为身份识别方式不一致导致协商不起来。

二、分支配置

配置ike提议

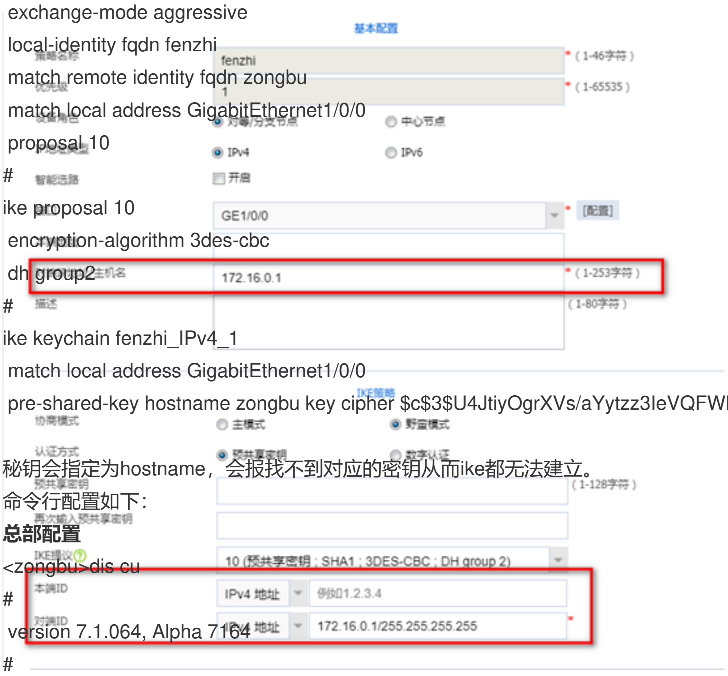
分支IKE策略--对端ID必须配置ipv4地址，因为分支要主动发起必须知道总部地址，另外如果分支对端I

配置ipsec策略，分支策略下发配置如下。

网络》VPN》ipsec》ipsec策略》新建，新建相应的ipsec策略等参数

注意：本端ID留空，对端ID选择ipv4地址

```
ike profile fenzhi_IPv4_1
 keychain fenzhi_IPv4_1
 exchange-mode aggressive
 local-identity fqdn fenzhi
 match remote identity fqdn zongbu
 match local address GigabitEthernet1/0/0
 proposal 10
#
ike proposal 10
 encryption-algorithm 3des-cbc
 dh group2
#
ike keychain fenzhi_IPv4_1
 match local address GigabitEthernet1/0/0
 pre-shared-key hostname zongbu key cipher $c$3$U4JtiyOgrXVs/aYytzz3leVQFWDORDQ7
```



秘钥会指定为hostname，会报找不到对应的密钥从而ike都无法建立。

命令行配置如下：

总部配置

配置ipsec保护的数据流及ipsec参数

```
<zongbu>dis cu
#
 version 7.1.064, Alpha 7164
#
 sysname zongbu
#
context Admin id 1
#
 telnet server enable
#
 irf mac-address persistent timer
 irf auto-update enable
 undo irf link-delay
 irf member 1 priority 1
#
ospf 1
```

area 0.0.0.0
 network 172.16.0.0 0.0.0.255
#
xbar load-single
password-recovery enable
lpu-type f-series
#
vlan 1
#
interface NULL0
#
interface LoopBack0
 ip address 1.1.1.1 255.255.255.255
#
interface GigabitEthernet1/0/0
 port link-mode route
 combo enable copper
 ip address 172.16.0.1 255.255.255.0
 ipsec apply policy zongbu
#
interface GigabitEthernet1/0/1
 port link-mode route
 combo enable copper
 ip address 172.16.2.1 255.255.255.0
#
interface GigabitEthernet1/0/2
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/3
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/4
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/5
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/6
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/7
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/8
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/9
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/10
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/11
 port link-mode route
 combo enable copper

```
#
interface GigabitEthernet1/0/12
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/13
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/14
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/15
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/16
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/17
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/18
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/19
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/20
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/21
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/22
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/23
 port link-mode route
 combo enable copper
#
security-zone name Local
#
security-zone name Trust
 import interface LoopBack0
#
security-zone name DMZ
#
security-zone name Untrust
 import interface GigabitEthernet1/0/0
 import interface GigabitEthernet1/0/1
#
security-zone name Management
#
 scheduler logfile size 16
#
```

```
line class aux
 user-role network-operator
#
line class console
 user-role network-admin
#
line class tty
 user-role network-operator
#
line class vty
 user-role network-operator
#
line aux 0
 user-role network-admin
#
line con 0
 authentication-mode scheme
 user-role network-admin
#
line vty 0 4
 authentication-mode scheme
 user-role network-admin
#
line vty 5 63
 user-role network-operator
#
 ip route-static 0.0.0.0 0 172.16.0.2
#
domain system
#
 aaa session-limit ftp 16
 aaa session-limit telnet 16
 aaa session-limit ssh 16
 domain default enable system
#
role name level-0
 description Predefined level-0 role
#
role name level-1
 description Predefined level-1 role
#
role name level-2
 description Predefined level-2 role
#
role name level-3
 description Predefined level-3 role
#
role name level-4
 description Predefined level-4 role
#
role name level-5
 description Predefined level-5 role
#
role name level-6
 description Predefined level-6 role
#
role name level-7
 description Predefined level-7 role
#
role name level-8
 description Predefined level-8 role
#
role name level-9
 description Predefined level-9 role
```

```
#
role name level-10
 description Predefined level-10 role
#
role name level-11
 description Predefined level-11 role
#
role name level-12
 description Predefined level-12 role
#
role name level-13
 description Predefined level-13 role
#
role name level-14
 description Predefined level-14 role
#
user-group system
#
local-user admin class manage
 password hash $h$6$UbIhNnPevyKUwfpm$LqR3+yg1IjNct39MkOR0H0iQXLkYB3jMqM4vbAeoXOh
babIIFnjJPEGR00YiYA1Sz4LiY3FmEdru2fOLMb1shQ==
 service-type telnet terminal http
 authorization-attribute user-role level-3
 authorization-attribute user-role network-admin
 authorization-attribute user-role network-operator
#
ipsec transform-set zongbu_IPv4_1
 esp encryption-algorithm 3des-cbc
 esp authentication-algorithm sha1
#
ipsec policy-template zongbu 1
 transform-set zongbu_IPv4_1
 local-address 172.16.0.1
 ike-profile zongbu_IPv4_1
#
ipsec policy zongbu 1 isakmp template zongbu
#
ike profile zongbu_IPv4_1
 keychain zongbu_IPv4_1
 exchange-mode aggressive
 local-identity address 172.16.0.1
 match remote identity address 0.0.0.0 0.0.0.0
 match local address GigabitEthernet1/0/0
 proposal 10
#
ike proposal 10
 encryption-algorithm 3des-cbc
 dh group2
#
ike keychain zongbu_IPv4_1
 match local address GigabitEthernet1/0/0
 pre-shared-key address 0.0.0.0 0.0.0.0 key cipher $c$3$nw8o7yIcjPSdFyAURIYIKXSd/sFIJgEN
#
 ip http enable
 ip https enable
#
security-policy ip
 rule 1 name test
  action pass
#
return
<zongbu>

<zongbu>dis ike sa
```

```
   Connection-ID   Remote              Flag        DOI
------------------------------------------------------------------------------
   9               172.16.1.1          RD          IPsec
Flags:
RD--READY RL--REPLACED FD-FADING RK-REKEY
<zongbu>dis ipse
<zongbu>dis ipsec sa
<zongbu>dis ipsec sa
-------------------------------
Interface: GigabitEthernet1/0/0
-------------------------------

  ----------------------------
  IPsec policy: zongbu
  Sequence number: 1
  Mode: Template
  ----------------------------
    Tunnel id: 0
    Encapsulation mode: tunnel
    Perfect Forward Secrecy:
    Inside VPN:
    Extended Sequence Numbers enable: N
    Traffic Flow Confidentiality enable: N
    Path MTU: 1444
    Tunnel:
        local  address: 172.16.0.1
        remote address: 172.16.1.1
    Flow:
        sour addr: 1.1.1.1/255.255.255.255  port: 0  protocol: ip
        dest addr: 2.2.2.2/255.255.255.255  port: 0  protocol: ip

    [Inbound ESP SAs]
      SPI: 1511053843 (0x5a10da13)
      Connection ID: 12884901891
      Transform set: ESP-ENCRYPT-3DES-CBC ESP-AUTH-SHA1
      SA duration (kilobytes/sec): 1843200/3600
      SA remaining duration (kilobytes/sec): 1843199/2576
      Max received sequence-number: 5
      Anti-replay check enable: Y
      Anti-replay window size: 64
      UDP encapsulation used for NAT traversal: N
      Status: Active

    [Outbound ESP SAs]
      SPI: 3440085931 (0xcd0b8bab)
      Connection ID: 12884901890
      Transform set: ESP-ENCRYPT-3DES-CBC ESP-AUTH-SHA1
      SA duration (kilobytes/sec): 1843200/3600
      SA remaining duration (kilobytes/sec): 1843199/2576
      Max sent sequence-number: 5
      UDP encapsulation used for NAT traversal: N
      Status: Active
<zongbu>
```

分支配置

```
<fenzhi>dis cu
#
 version 7.1.064, Alpha 7164
#
 sysname fenzhi
#
context Admin id 1
#
```

```
 telnet server enable
#
 irf mac-address persistent timer
 irf auto-update enable
 undo irf link-delay
 irf member 1 priority 1
#
ospf 1
 area 0.0.0.0
  network 172.16.1.0 0.0.0.255
#
 xbar load-single
 password-recovery enable
 lpu-type f-series
#
vlan 1
#
interface NULL0
#
interface LoopBack0
 ip address 2.2.2.2 255.255.255.255
#
interface GigabitEthernet1/0/0
 port link-mode route
 combo enable copper
 ip address 172.16.1.1 255.255.255.0
 ipsec apply policy fenzhi
#
interface GigabitEthernet1/0/1
 port link-mode route
 combo enable copper
 ip address 172.16.2.2 255.255.255.0
#
interface GigabitEthernet1/0/2
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/3
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/4
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/5
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/6
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/7
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/8
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/9
 port link-mode route
 combo enable copper
```

```
#
interface GigabitEthernet1/0/10
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/11
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/12
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/13
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/14
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/15
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/16
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/17
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/18
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/19
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/20
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/21
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/22
 port link-mode route
 combo enable copper
#
interface GigabitEthernet1/0/23
 port link-mode route
 combo enable copper
#
security-zone name Local
#
security-zone name Trust
 import interface LoopBack0
#
security-zone name DMZ
#
```

```
security-zone name Untrust
 import interface GigabitEthernet1/0/0
 import interface GigabitEthernet1/0/1
#
security-zone name Management
#
 scheduler logfile size 16
#
line class aux
 user-role network-operator
#
line class console
 user-role network-admin
#
line class tty
 user-role network-operator
#
line class vty
 user-role network-operator
#
line aux 0
 user-role network-admin
#
line con 0
 authentication-mode scheme
 user-role network-admin
#
line vty 0 4
 authentication-mode none
 user-role network-admin
#
line vty 5 63
 authentication-mode none
 user-role network-operator
#
 ip route-static 0.0.0.0 0 172.16.1.2
#
acl advanced name IPsec_fenzhi_IPv4_1
 rule 1 permit ip source 2.2.2.2 0 destination 1.1.1.1 0
#
domain system
#
 aaa session-limit ftp 16
 aaa session-limit telnet 16
 aaa session-limit ssh 16
 domain default enable system
#
role name level-0
 description Predefined level-0 role
#
role name level-1
 description Predefined level-1 role
#
role name level-2
 description Predefined level-2 role
#
role name level-3
 description Predefined level-3 role
#
role name level-4
 description Predefined level-4 role
#
role name level-5
 description Predefined level-5 role
```

```
#
role name level-6
 description Predefined level-6 role
#
role name level-7
 description Predefined level-7 role
#
role name level-8
 description Predefined level-8 role
#
role name level-9
 description Predefined level-9 role
#
role name level-10
 description Predefined level-10 role
#
role name level-11
 description Predefined level-11 role
#
role name level-12
 description Predefined level-12 role
#
role name level-13
 description Predefined level-13 role
#
role name level-14
 description Predefined level-14 role
#
user-group system
#
local-user admin class manage
 password hash $h$6$UbIhNnPevyKUwfpm$LqR3+yg1IjNct39MkOR0H0iQXLkYB3jMqM4vbAeoXOh
babIIFnjJPEGR00YiYA1Sz4LiY3FmEdru2fOLMb1shQ==
 service-type telnet terminal http
 authorization-attribute user-role level-3
 authorization-attribute user-role network-admin
 authorization-attribute user-role network-operator
#
ipsec transform-set fenzhi_IPv4_1
 esp encryption-algorithm 3des-cbc
 esp authentication-algorithm sha1
#
ipsec policy fenzhi 1 isakmp
 transform-set fenzhi_IPv4_1
 security acl name IPsec_fenzhi_IPv4_1
 remote-address 172.16.0.1
 ike-profile fenzhi_IPv4_1
#
ike profile fenzhi_IPv4_1
 keychain fenzhi_IPv4_1
 exchange-mode aggressive
 match remote identity address 172.16.0.1 255.255.255.255
 match local address GigabitEthernet1/0/0
 proposal 10
#
ike proposal 10
 encryption-algorithm 3des-cbc
 dh group2
#
ike keychain fenzhi_IPv4_1
 match local address GigabitEthernet1/0/0
 pre-shared-key address 172.16.0.1 255.255.255.255 key cipher $c$3$0D8k6aHsDClx2d/siPNHdmC
MjeDjWHJR
#
```

```
 ip http enable
 ip https enable
#
security-policy ip
 rule 1 name test
  action pass
#
return
<fenzhi>


<fenzhi>dis ike sa
   Connection-ID   Remote               Flag        DOI
--------------------------------------------------------------------------------
   37              172.16.0.1           RD          IPsec
Flags:
RD--READY RL--REPLACED FD-FADING RK-REKEY
<fenzhi>dis ipse
<fenzhi>dis ipsec sa
<fenzhi>dis ipsec sa
-------------------------------
Interface: GigabitEthernet1/0/0
-------------------------------

  ----------------------------
  IPsec policy: fenzhi
  Sequence number: 1
  Mode: ISAKMP
  ----------------------------
    Tunnel id: 0
    Encapsulation mode: tunnel
    Perfect Forward Secrecy:
    Inside VPN:
    Extended Sequence Numbers enable: N
    Traffic Flow Confidentiality enable: N
    Path MTU: 1444
    Tunnel:
        local  address: 172.16.1.1
        remote address: 172.16.0.1
    Flow:
        sour addr: 2.2.2.2/255.255.255.255  port: 0  protocol: ip
        dest addr: 1.1.1.1/255.255.255.255  port: 0  protocol: ip

    [Inbound ESP SAs]
      SPI: 3440085931 (0xcd0b8bab)
      Connection ID: 12884901891
      Transform set: ESP-ENCRYPT-3DES-CBC ESP-AUTH-SHA1
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      SA remaining duration (kilobytes/sec): 1843199/2400
      Max received sequence-number: 5
      Anti-replay check enable: Y
      Anti-replay window size: 64
      UDP encapsulation used for NAT traversal: N
      Status: Active

    [Outbound ESP SAs]
      SPI: 1511053843 (0x5a10da13)
      Connection ID: 12884901890
      Transform set: ESP-ENCRYPT-3DES-CBC ESP-AUTH-SHA1
      SA duration (kilobytes/sec): 1843200/3600
      SA remaining duration (kilobytes/sec): 1843199/2400
      Max sent sequence-number: 5
      UDP encapsulation used for NAT traversal: N
      Status: Active
```