Establish IPSec VPN between Cisco and IR900

Configure Cisco Router

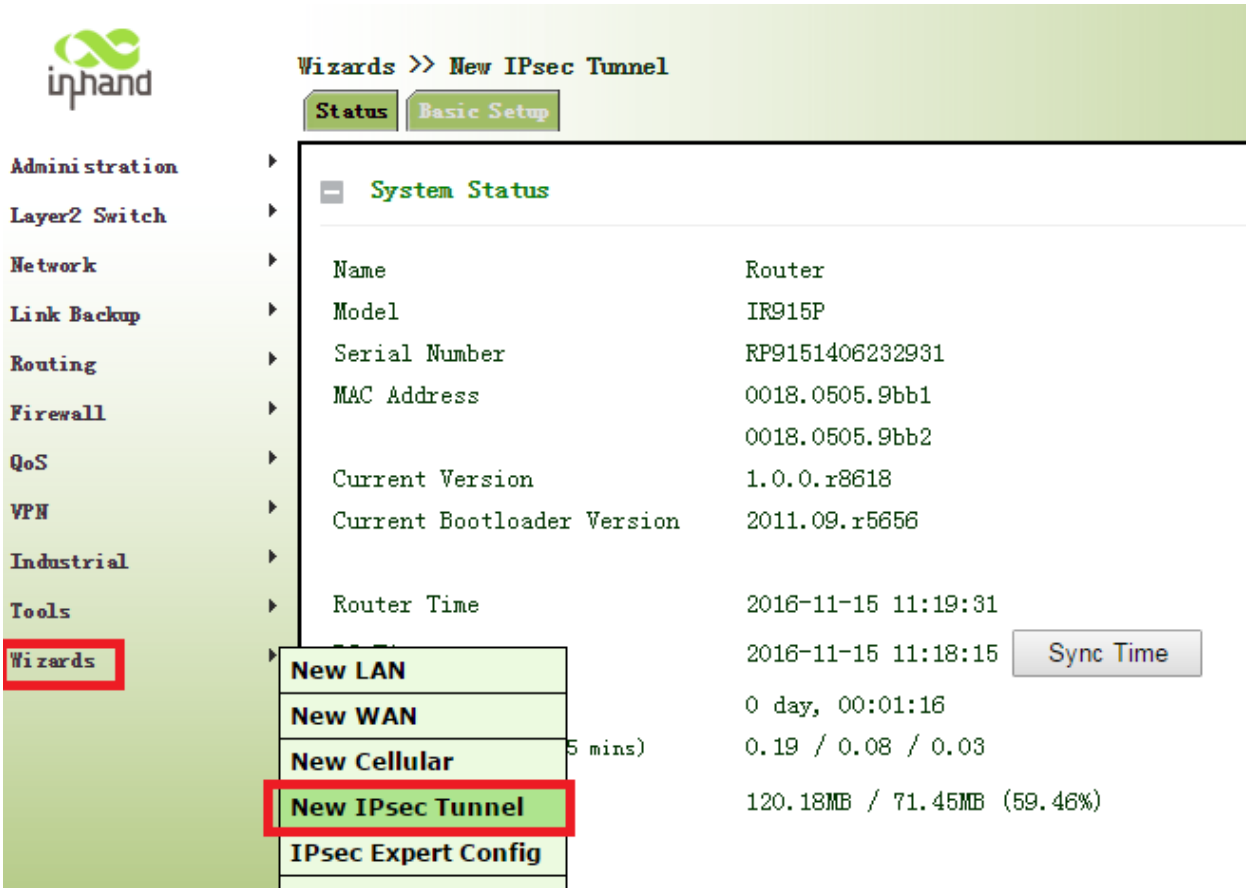
```
Current configuration : 1603 bytes
!
 crypto isakmp policy 1                                    //define IKE Policy
 encr 3des                                                 //define 3des cryptographic algorithm
 hash md5                                                  //define md5 hashing algorithm
 authentication pre-share                                  //define to pre-shared key authentication mode
 group 2                                                   //define Diffie-Hellman identifier
crypto isakmp key abc123 address 0.0.0.0 0.0.0.0           //configure pre-shared key to abc123 (according to your need),
                                                           the other side of VPN is 0.0.0.0 (because InRouter's IP is always dynamic IP)
!
!
crypto ipsec transform-set ESP-3DES-MD5 esp-3des esp-md5-hmac   //create mapping ensemble esp-3des esp-md5-hmac,
                                                                "ESP-3DES-MD5" is the name of mapping ensemble.
!
!
!
crypto dynamic-map DYNMAP 100                              //create dynamic security map DYNMAP 100
 set transform-set ESP-3DES-MD5                            //use the mapping ensemble mentioned above ESP-3DES-MD5
 match address 100                                         //quoted the access-list to determine the flow of protected
!
!
crypto map OUTSIDE_MAP 10000 ipsec-isakmp dynamic DYNMAP   //put dynamic map into formal map
                                                           "OUTSIDE_MAP" is the name of formal map
!
!
!
!
interface FastEthernet0/0
 ip address 219.239.xxx.xxx 255.255.255.240
 ip nat outside
 duplex auto
 speed auto
 crypto map OUTSIDE_MAP                                    //apply confidentiality map to FastEthernet0/0
!

interface FastEthernet0/1
```

```
 ip address 192.168.1.1 255.255.255.0
 ip nat inside
 duplex auto
 speed auto
!
ip nat inside source list 101 interface FastEthernet0/0 overload   //configure NAT, the access from 192.168.1.0/24 to 192.168.2.0/24 is not translated , other access will be translated to IP address on FastEthernet0/0
ip route 0.0.0.0 0.0.0.0 219.239.xxx.xxx                          //configure RIP
!
no ip http server
no ip http secure-server
!
access-list 100 permit ip 192.168.1.0 0.0.0.255 192.168.2.0 0.0.0.255      //define VPN protected flow
access-list 101 deny   ip 192.168.1.0 0.0.0.255 192.168.2.0 0.0.0.255      //define NAT regulated access-list
access-list 101 permit ip 192.168.1.0 0.0.0.255 any
!
end
```

Configure IR900

1. Click "Wizard" to create a new IPSec Tunnel:



Basic Parameters: set basic parameters of IPSec tunnel.

Destination Address: set to VPN server IP/domain, e.g.: server IP address is 203.86.63.238

Startup Modes: select Auto Activated.

Negotiation Mode: optional between Main Mode and Aggressive Mode. Generally, select Main Mode.t

Local Subnet: IPSec local subnet protected. E.g.: 192.168.2.1. It`s the InRouter subnet, you can set InRouter LAN address

Local Net Mask: IPSec local Net Mask protected. E.g.: 255.255.255.0.

Remote Subnet: IPSec remote subnet protected. E.g.: 192.168.11.1. It`s the ZyXel firewall intranet, you can set the subnet which your business server is in.

Remote Net Mask: IPSec remote Net Mask protected. E.g.: 255.255.0.0.

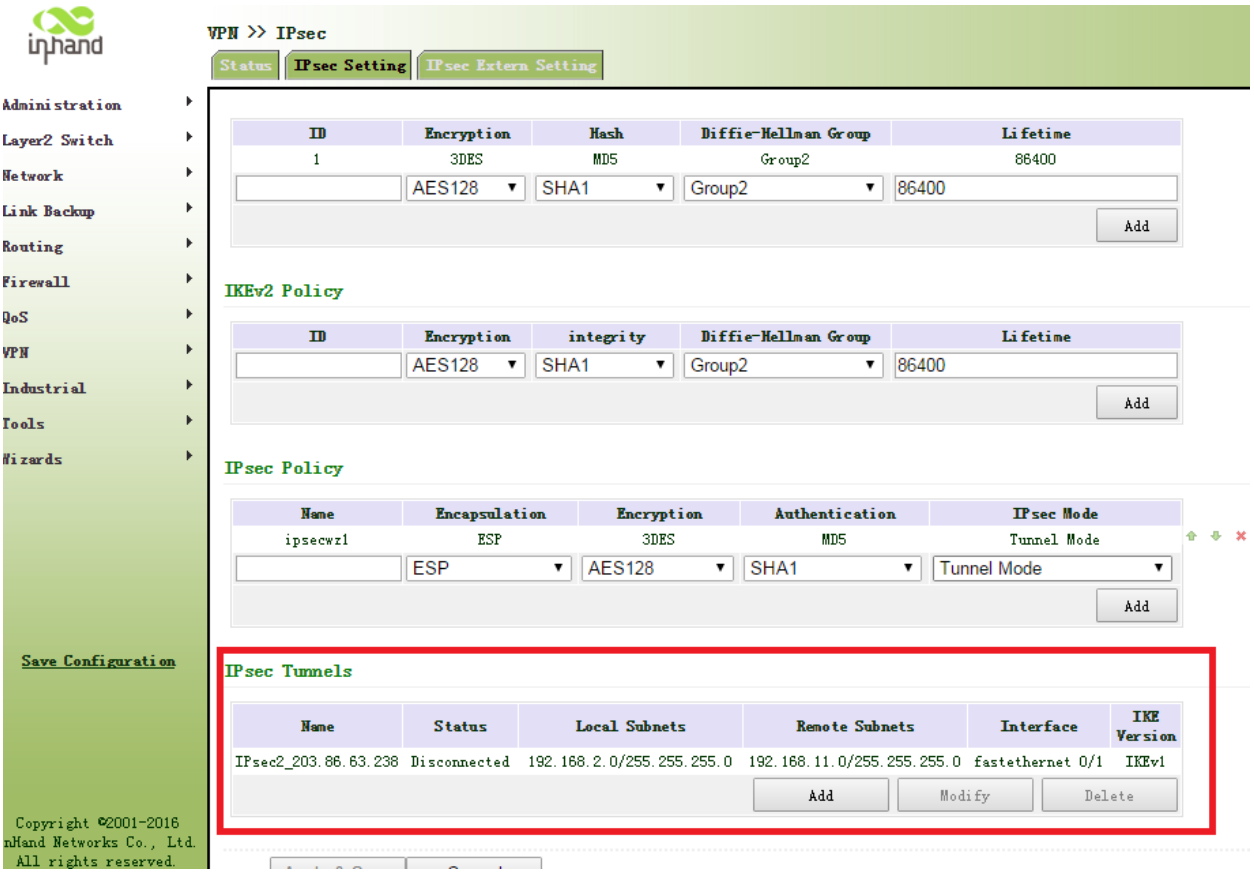
Phase 1 Parameters: configure parameters during the Phase 1 of IPSec negotiation.

IKE Policy: optional between 3DES-MD5-96 and AES-MD5-96, suggest selecting 3DES-MD5-96.
IKE Lifetime: the default is 86400 seconds.
Local ID Type: optional among FQDN, USERFQDN, IP address, suggest selecting IP address.
Remote ID Type: optional among FQDN, USERFQDN, IP address, suggest selecting IP address.
Authentication Type: optional between Shared Key and Certificate, generally choose Shared Key.
Key: set IPSec VPN negotiating key.

Phase 2 Parameters: configure parameters during the Phase 2 of IPSec negotiation.

IPSec Policy: optional between 3DES-MD5-96 and AES-MD5-96, suggest selecting 3DES-MD5-96.
IPSec Lifetime: the default is 3600 seconds.

2. Click "Apply" to finish adding IPSec Tunnel:



You can check the basic information about this IPsec VPN tunnel as the above picture shows.

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