SecPath 1000F防火墙主模式IPSec with CA 手工申请典型配置指南

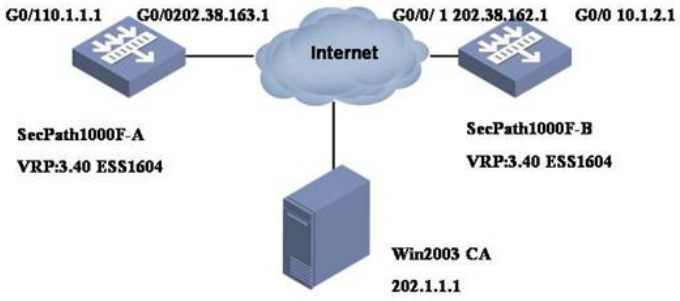
刘军 2006-11-03 发表

SecPath 1000F防火墙主模式IPSec
with CA手工申请典型配置指南

一、 组网需求

用户需要在主模式下，手动申请证书建立IPSec。

二、 组网图



如图所示，SecPath1000F-A要与SecPath1000F-B建立基于证书的VPN。

软件版本如下：

SecPath1000F-A： VRP 3.40 ESS 1604;

SecPath1000F-B： VRP 3.40 ESS 1604;

三、 典型配置

1.基本配置命令

定义PKI Domain

pki domain 8042.com *//Domain名称*

ca identifier h3c *//ca服务器的名称*

certificate request url http://3.1.1.1 *//由于是手动发起，URL可任意配置*

certificate request from ra *//Windows2003仅支持RA模式*

certificate request entity 1kf-2

crl check disable

PKI实体配置

pki entity 8042.com *//PKI实体配置，此处名称应该与PKI Domain中的实体名称一样*

common-name SecPath 1kf-2

locality ShangDi

state Beijing

country CN

fqdn 1kf-2.8042.com

通过RSA生成公、私密钥对

[Quidway]rsa local-key-pair create

打印出本地证书请求信息，通过带外方式向RA申请证书

[Quidway]pki request-certificate domain 8042.com pkcs10

```
[Quidway]pki request-certificate do 1 pkcs10
-----BEGIN CERTIFICATE REQUEST-----
MIIBCzCBtgIBADBRMQswCQYDVQQGEwJDTjEQMA4GA1UEBxMHYmVpamluZzEUMBIG
A1UEChMLaHVhd2VpLTNjb20xCzAJBgNVBAsTAnRjMQ0wCwYDVQQDEwQzMDAwMFww
DQYJKoZIhvcNAQEBBQADSwAwSAJBAMz2VmyM1HY0EYliNCwSkWh6VgfTIDN1kad2
T9HjT94caY2lACnfPoX7UHtQmhyCmDmmefGxTBY4S2ogLlYrAXUCAwEAAaAAMA0G
CSqGSIb3DQEBBAUAA0EAZW4vIWj2kdDH9GCpsml5Lr+heIHPWMJJay6I91SEUggT
ZalsGwVTegJEYBWt6F7kCD63dXxoh8oUdUPJJ2EBYw==
-----END CERTIFICATE REQUEST-----
```

向win2003server申请证书（证书服务器的安装及使用请参照附件《证书服务器配置指南》

打开证书服务器申请主页，选择“申请一个证书”

```
[Quidway]pki request-certificate do 1 pkcs10
-----BEGIN CERTIFICATE REQUEST-----
MIIBCzCBtgIBADBRMQswCQYDVQQGEwJDTjEQMA4GA1UEBxMHYmVpamluZzEUMBIG
A1UEChMLaHVhd2VpLTNjb20xCzAJBgNVBAsTAnRjMQ0wCwYDVQQDEwQzMDAwMFww
DQYJKoZIhvcNAQEBBQADSwAwSAJBAMz2VmyMlHY0EYliNCwSkWh6VgfTIDN1kad2
T9HjT94caY2lACnfPoX7UHtQmhyCmDmmefGxTBY4S2ogLlYrAXUCAwEAAaAAMA0G
CSqGSIb3DQEBBAUAA0EAZW4vIWjZkdDH9GCpsml5Lr+heIHPWMJJay6I91SEUggT
ZalsGwVTegJEYBWt6F7kCD63dXxoh8oUdUPJJZEBYw==
-----END CERTIFICATE REQUEST-----
```

选择“高级证书申请”

选择使用PKCS#10文件提交证书申请

将路由器中本地证书请求信息粘贴到表格中，点击提交

完成证书申请后，可以看到如下信息。

当证书服务器管理员颁发证书后，回到主页点击“查看挂起…”获取实体证书，点击“下载一个CA…”获取CA证书

将CA和实体证书通过FTP上载到路由器的FLASH中，用import-certificate引入证书

在引入CA证书时，需要确定该证书的“指纹”是否正确

```
<Quidway>dir
Directory of flash:/

   0   -rw-   8853504  Dec 06 2004 12:00:03   main.bin
   1   -rw-       428  Dec 28 2004 10:31:33   hostkey
   2   -rw-       572  Dec 28 2004 10:31:43   serverkey
   3   -rw-       851  Dec 28 2004 13:57:19   3000.cer
   4   -rw-       870  Dec 28 2004 13:57:33   certnew.cer
   5   -rw-      1309  Dec 21 2004 10:44:17   ipsecpki.cfg

31877 KB total (23196 KB free)

<Quidway>sys
System View: return to User View with Ctrl+Z.
[Quidway]pki import-certificate ca domain 1 der filename certnew.cer
```

正确引入实体证书后，会有相应提示信息

最终配置

防火墙 SecPath1000F-A的最终配置

SecPath1000F-A>dis cu

#

sysname SecPath1000F-A

#

firewall packet-filter enable

firewall packet-filter default permit

#

undo connection-limit enable

connection-limit default deny

connection-limit default amount upper-limit 50 lower-limit 20

#

firewall statistic system enable

#

pki entity 1kf-2

common-name SecPath 1kf-2

locality ShangDi

state Beijing

country CN

fqdn 1kf-2.8042.com

#

pki domain 8042.com

ca identifier h3c

certificate request url http://3.3.3.1

certificate request from ra

certificate request entity 1kf-2

crl check disable

#

radius scheme system

#

domain system

#

#

ike proposal 2

authentication-method rsa-signature

encryption-algorithm 3des-cbc

dh group5

#

ike peer peer

remote-address 202.38.162.1

```
certificate domain 8042.com
#
ipsec proposal pro
transform ah-esp
esp authentication-algorithm md5
#
ipsec policy pol 1 isakmp
security acl 3000
ike-peer peer
proposal pro
#
acl number 3000
rule 1 permit ip source 10.1.1.0 0.0.0.255 destination 10.1.2.0 0.0.0.2
55
#
interface Aux0
async mode flow
#
interface GigabitEthernet0/0
ip address 202.38.163.1 255.255.255.0
ipsec policy pol
#
interface GigabitEthernet0/1
ip address 10.1.1.1 255.255.255.0
#
interface GigabitEthernet1/0
ip address 192.168.1.2 255.255.255.0
#
interface GigabitEthernet1/1
#
interface Encrypt2/0
#
interface NULL0
#
firewall zone local
set priority 100
#
firewall zone trust
add interface GigabitEthernet0/0
add interface GigabitEthernet0/1
add interface GigabitEthernet1/0
add interface GigabitEthernet1/1
set priority 85
#
firewall zone untrust
set priority 5
#
firewall zone DMZ
set priority 50
#
firewall interzone local trust
#
firewall interzone local untrust
#
firewall interzone local DMZ
#
firewall interzone trust untrust
#
firewall interzone trust DMZ
#
firewall interzone DMZ untrust
#
ip route-static 0.0.0.0 0.0.0.0 202.38.163.2 preference 60
```

#
firewall defend syn-flood zone local
#
user-interface con 0
user-interface aux 0
user-interface vty 0 4
#
return
防火墙 SecPath1000F-B的最终配置
SecPath1000F-B>dis cu
#
sysname SecPath1000F-B
#
firewall packet-filter enable
firewall packet-filter default permit
#
connection-limit disable
connection-limit default deny
connection-limit default amount upper-limit 50 lower-limit 20
#
firewall statistic system enable
#
pki entity 1kf-2
common-name SecPath 1kf-2
locality ShangDi
state Beijing
country CN
fqdn 1kf-2.8042.com
#
pki domain 8042.com
ca identifier h3c
certificate request url http://3.3.3.1/
 certificate request from ra
certificate request entity 1kf-2
crl check disable
#
radius scheme system
#
domain system
#
#
ike proposal 2
authentication-method rsa-signature
encryption-algorithm 3des-cbc
dh group5
#
ike peer peer
remote-address 202.38.163.1
certificate domain 8042.com
#
ipsec proposal pro
transform ah-esp
esp authentication-algorithm md5
#
ipsec policy pol 1 isakmp
security acl 3000
ike-peer peer
proposal pro
#
acl number 3000
rule 1 permit ip source 10.1.2.0 0.0.0.255 destination 10.1.1.0 0.0.0.2
55
#
interface Aux0

```
async mode flow
#
interface Ethernet1/0
#
interface GigabitEthernet0/0
ip address 202.38.162.1 255.255.255.0
ipsec policy pol
#
interface GigabitEthernet0/1
ip address 10.1.2.1 255.255.255.0
#
interface Encrypt2/0
#
interface NULL0
#
firewall zone local
set priority 100
#
firewall zone trust
add interface GigabitEthernet0/0
add interface GigabitEthernet0/1
set priority 85
#
firewall zone untrust
set priority 5
#
firewall zone DMZ
set priority 50
#
firewall interzone local trust
#
firewall interzone local untrust
#
firewall interzone local DMZ
#
firewall interzone trust untrust
#
firewall interzone trust DMZ
#
firewall interzone DMZ untrust
#
ip route-static 0.0.0.0 0.0.0.0 202.38.162.2 preference 60
#
user-interface con 0
user-interface aux 0
user-interface vty 0 4
#
return
```

四、配置关键点

IIKE配置时要要用RSA签名

p配置IKE PEER时要采用申请的domain的证书