Reference: CiscoSkills.net - ASA Site to Site VPN (PATed)

Acme Corporation Firewall Configuration:

```
: Saved
: Serial Number: 9A5CH5MT6NW
                 ASAv, 2048 MB RAM, CPU Pentium II 3600 MHz
: Hardware:
ASA Version 9.6(2)
hostname ASA-1
enable password 2KFQnbNIdI.2KYOU encrypted
xlate per-session deny tcp any4 any4
xlate per-session deny tcp any4 any6
xlate per-session deny tcp any6 any4 xlate per-session deny tcp any6 any6
xlate per-session deny udp any4 any4 eq domain
xlate per-session deny udp any4 any6 eq domain xlate per-session deny udp any6 any4 eq domain
xlate per-session deny udp any6 any6 eq domain
passwd 2KFQnbNIdI.2KYOU encrypted
names
interface GigabitEthernet0/0
 description to SW-1
duplex full
 no nameif
 no security-level
 no ip address
interface GigabitEthernet0/0.5
 vlan 5
 nameif Inside
 security-level 100
 ip address 10.0.0.1 255.255.255.0
interface GigabitEthernet0/0.10
 vlan 10
 nameif DMZ
 security-level 50 ip address 10.254.254.1 255.255.255.0
interface GigabitEthernet0/1
 description to Internet-1 duplex full
 nameif Outside
 security-level 0 ip address 192.0.2.10 255.255.255.128
interface Management0/0 description OOB Management
 duplex full
 management-only
 nameif mgmt
 security-level 100
ip address 172.16.1.73 255.255.255.0
ftp mode passive
same-security-traffic permit inter-interface object network Inside-Network
subnet 10.0.0.0 255.255.255.0 object network 192.0.2.1
 host 192.0.2.1
object network ACCORP-DMZ-SERVER-1 host 10.254.254.10
object network Public-IP-192.0.2.100
host 192.0.2.100
object network VPN-CONTOSO-CLIENT-1
 host 203.0.113.30
object network ACCORP-DMZ-SERVER-2 host 10.254.254.20
object network ACCORP-DMZ-LB-1
host 10.254.254.30
object network Public-IP-192.0.2.50
 host 192.0.2.50
object network VPN-CONTOSO-CLIENT-2 host 203.0.113.50
object-group network ACCORP-DMZ-SERVERS
 network-object object ACCORP-DMZ-SERVER-2
network-object object ACCORP-DMZ-SERVER-1
object-group network VPN-REMOTE-ACCORP-CONTOSO
 network-object object VPN-CONTOSO-CLIENT-1
network-object object VPN-CONTOSO-CLIENT-2
object-group network VPN-LOCAL-ACCORP-CONTOSO
 network-object object Public-IP-192.0.2.100
network-object object Public-IP-192.0.2.50
```

```
access-list Outside_access_in extended permit icmp any4 object ACCORP-DMZ-SERVER-1 echo access-list Outside_access_in extended permit icmp any4 object ACCORP-DMZ-SERVER-1 echo-reply
access-list Outside_access_in extended permit icmp any4 10.0.0.0 255.255.255.0 echo-reply
access-list Outside_access_in extended permit ip any4 object Public-IP-192.0.2.100
access-list ACL-VPN-ACCORP-CONTOSO extended permit ip object-group VPN-LOCAL-ACCORP-CONTOSO object-group VPN-REMOTE-ACCORP-CONTOSO
pager lines 23
logging enable
logging asdm informational
mtu Inside 1500
mtu DMZ 1500
mtu Outside 1500
mtu mgmt 1500
no failover
no monitor-interface service-module
icmp unreachable rate-limit 1 burst-size 1
no asdm history enable arp timeout 14400
no arp permit-nonconnected
arp rate-limit 8192
nat (DMZ,Outside) source dynamic ACCORP-DMZ-SERVERS Public-IP-192.0.2.100 destination static VPN-CONTOSO-CLIENT-1 VPN-CONTOSO-CLIENT-1
nat (Outside,DMZ) source static VPN-CONTOSO-CLIENT-2 VPN-CONTOSO-CLIENT-2 destination static Public-IP-192.0.2.50 ACCORP-DMZ-LB-1 no-proxy-
nat (Inside, Outside) source dynamic Inside-Network interface
access-group Outside_access_in in interface Outside
route Outside 0.0.0.0 0.0.0.0 192.0.2.1 1
timeout xlate 3:00:00
timeout pat-xlate 0:00:30
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00 sctp 0:02:00 icmp 0:00:02
timeout sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp 0:05:00 mgcp-pat 0:05:00
timeout sip 0:30:00 sip_media 0:02:00 sip-invite 0:03:00 sip-disconnect 0:02:00
timeout sip-provisional-media 0:02:00 uauth 0:05:00 absolute timeout tcp-proxy-reassembly 0:01:00
timeout floating-conn 0:00:00
timeout conn-holddown 0:00:15
user-identity default-domain LOCAL
aaa authentication ssh console LOCAL
http server enable
http 0.0.0.0 0.0.0.0 mgmt
no snmp-server location
no snmp-server contact
crypto ipsec ikev1 transform-set ESP-AES-128-SHA esp-aes esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-AES-128-MD5 esp-aes esp-md5-hmac crypto ipsec ikev1 transform-set ESP-AES-192-SHA esp-aes-192 esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-AES-192-MD5 esp-aes-192 esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-AES-256-SHA esp-aes-256 esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-AES-256-MD5 esp-aes-256 esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-AES-128-SHA-TRANS esp-aes esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-AES-128-SHA-TRANS mode transport crypto ipsec ikev1 transform-set ESP-AES-128-MD5-TRANS esp-aes esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-AES-128-MD5-TRANS mode transport
crypto ipsec ikev1 transform-set ESP-AES-192-SHA-TRANS esp-aes-192 esp-sha-hmac crypto ipsec ikev1 transform-set ESP-AES-192-SHA-TRANS mode transport
crypto ipsec ikev1 transform-set ESP-AES-192-MD5-TRANS esp-aes-192 esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-AES-192-MD5-TRANS mode transport crypto ipsec ikev1 transform-set ESP-AES-256-SHA-TRANS esp-aes-256 esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-AES-256-SHA-TRANS mode transport
crypto ipsec ikev1 transform-set ESP-AES-256-MD5-TRANS esp-aes-256 esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-AES-256-MD5-TRANS mode transport
crypto ipsec ikev1 transform-set ESP-3DES-SHA esp-3des esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-3DES-MD5 esp-3des esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-3DES-SHA-TRANS esp-3des esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-3DES-SHA-TRANS mode transport
crypto ipsec ikev1 transform-set ESP-3DES-MD5-TRANS esp-3des esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-3DES-MD5-TRANS mode transport
crypto ipsec ikev1 transform-set ESP-DES-SHA esp-des esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-DES-MD5 esp-des esp-md5-hmac crypto ipsec ikev1 transform-set ESP-DES-SHA-TRANS esp-des esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-DES-SHA-TRANS mode transport
crypto ipsec ikev1 transform-set ESP-DES-MD5-TRANS esp-des esp-md5-hmac crypto ipsec ikev1 transform-set ESP-DES-MD5-TRANS mode transport
crypto ipsec security-association pmtu-aging infinite
crypto map CM-ACCORP-CONTOSO 1 match address ACL-VPN-ACCORP-CONTOSO crypto map CM-ACCORP-CONTOSO 1 set peer 203.0.113.10 crypto map CM-ACCORP-CONTOSO 1 set ikev1 transform-set ESP-AES-128-SHA
crypto map CM-ACCORP-CONTOSO 1 set nat-t-disable
crypto map CM-ACCORP-CONTOSO interface Outside
crypto ca trustpoint _SmartCallHome_ServerCA
 no validation-usage
 crl configure
crypto ca trustpool policy
 auto-import
crypto ca certificate chain _SmartCallHome_ServerCA
 certificate ca 6ecc7aa5a7032009b8cebcf4e952d491
     308205ec 308204d4 a0030201 0202106e cc7aa5a7 032009b8 cebcf4e9 52d49130
     0d06092a 864886f7 0d010105 05003081 ca310b30 09060355 04061302 55533117
     30150603 55040a13 0e566572 69536967 6e2c2049 6e632e31 1f301d06 0355040b 13165665 72695369 676e2054 72757374 204e6574 776f726b 313a3038 06035504
     0b133128 63292032 30303620 56657269 5369676e 2c20496e 632e202d 20466f72
     28617574 686f7269 7a656420 75736520 6f6e6c79 31453043 86035504 03133c56 65726953 69676e20 436c6173 73203320 5075626c 69632050 72696d61 72792043 65727469 66696361 74696f6e 20417574 686f7269 7479202d 20473530 1e170d31
```

30303230 38303030 3030305a 170d3230 30323037 32333539 35395a30 81b5310b

```
30090603 55040613 02555331 17301506 0355040a 130e5665 72695369 676e2c20 496e632e 311f301d 06035504 0b131656 65726953 69676e20 54727573 74204e65
     74776f72 6b313b30 39060355 040b1332 5465726d 73206f66 20757365 20617420
    68747470 733a2f2f 7777772e 76657269 7369676e 2e636f6d 2f727061 20286329 3130312f 302d0603 55040313 26566572 69536967 6e20436c 61737320 33205365
     63757265 20536572 76657220 4341202d 20473330 82012230 0d06092a 864886f7
    0d010101 05000382 010f0030 82010a02 82010100 b187841f c20c45f5 bcab2597
    a7ada23e 9cbaf6c1 39b88bca c2ac56c6 e5bb658e 444f4dce 6fed094a d4af4e10
     9c688b2e 957b899b 13cae234 34c1f35b f3497b62 83488174 d188786c 0253f9bc
     7f432657 5833833b 330a17b0 d04e9124 ad867d64 12dc744a 34a11d0a ea961d0b
    15fca34b 3bce6388 d0f82d0c 948610ca b69a3dca eb379c00 48358629 5078e845
     63cd1941 4ff595ec 7b98d4c4 71b350be 28b38fa0 b9539cf5 ca2c23a9 fd1406e8
    18b49ae8 3c6e81fd e4cd3536 b351d369 ec12ba56 6e6f9b57 c58b14e7 0ec79ced 4a546ac9 4dc5bf11 b1ae1c67 81cb4455 33997f24 9b3f5345 7f861af3 3cfa6d7f
    81f5b84a d3f58537 1cb5a6d0 09e4187b 384efa0f 02030100 01a38201 df308201
    db303406 082b0601 05050701 01042830 26302406 082b0601 05050730 01861868
     7474703a 2f2f6f63 73702e76 65726973 69676e2e 636f6d30 12060355 1d130101
     ff040830 060101ff 02010030 70060355 1d200469 30673065 060b6086 480186f8
    45010717 03305630 2806082h 06010505 07020116 1c687474 70733a2f 2f777777
    2e766572 69736967 6e2e636f 6d2f6370 73302a06 082b0601 05050702 02301e1a
    1c687474 70733a2f 2f777777 2e766572 69736967 6e2e636f 6d2f7270 61303496 03551d1f 042d302b 3029a027 a0258623 68747470 3a2f2f63 726c2e76 65726973
    69676e2e 636f6d2f 70636133 2d67352e 63726c30 0e060355 1d0f0101 ff040403
    02010630 6d06082b 06010505 07010c04 61305fa1 5da05b30 59305730 55160969 6d616765 2f676966 3021301f 30070605 2b0e0302 1a04148f e5d31a86 ac8d8e6b
    c3cf806a d448182c 7b192e30 25162368 7474703a 2f2f6c6f 676f2e76 65726973
    69676e2e 636f6d2f 76736c6f 676f2e67 69663028 0603551d 11042130 1fa41d30 1b311930 17060355 04031310 56657269 5369676e 4d504b49 2d322d36 301d0603
     551d0e04 1604140d 445c1653 44c1827e 1d20ab25 f40163d8 be79a530 1f060355
    1d230418 30168014 7fd365a7 c2ddecbb f03009f3 4339fa02 af333133 300d0609
    28864886 f70d0101 05050003 82010100 0c8324ef ddc30cd9 589cfe36 66eb8a80
4bd1a3f7 9df3cc53 ef829ea3 a1e697c1 589d756c e01d1b4c fad1c12d 05c0ea6e
    b2227055 d9203340 3307c265 83fa8f43 379bea0e 9a6c70ee f69c803b d937f47a
    6decd018 7d494aca 99c71928 a2bed877 24f78526 866d8705 404167d1 273aeddc
     481d22cd 0b0b8bbc f4b17bfd b499a8e9 762ae11a 2d876e74 d388dd1e 22c6df16
    b62b8214 0a945cf2 50ecafce ff62370d ad65d306 4153ed02 14c8b558 28a1ace0 5becb37f 954afb03 c8ad26db e6667812 4ad99f42 fbe198e6 42839b8f 8f6724e8
    6119b5dd cdb50b26 058ec36e c4c875b8 46cfe218 065ea9ae a8819a47 16de0c28
    6c2527b9 deb78458 c61f381e a4c4cb66
  quit
crypto ikev1 enable Outside
crypto ikev1 policy 20
 authentication rsa-sig
 encryption aes-256
 hash sha
 group 2
 .
lifetime 86400
crypto ikev1 policy 30
 authentication pre-share
 encryption aes-256
 hash sha
 group 2
 lifetime 86400
crypto ikev1 policy 50
 authentication rsa-sig
 encryption aes-192
 hash sha
 group 2
 lifetime 86400
crypto ikev1 policy 60
 authentication pre-share
 encryption aes-192
 hash sha
 group 2
 lifetime 86400
crypto ikev1 policy 80
 authentication rsa-sig
 encryption aes
 hash sha
 group 2
 lifetime 86400
crypto ikev1 policy 90
 authentication pre-share
 encryption aes
 hash sha
 group 2
 lifetime 86400
crypto ikev1 policy 110
 authentication rsa-sig
 encryption 3des
 hash sha
 group 2
 lifetime 86400
crypto ikev1 policy 120
 authentication pre-share
 encryption 3des
 hash sha
 group 2
 lifetime 86400
crypto ikev1 policy 140
 authentication rsa-sig
```

encryption des

```
group 2
lifetime 86400
crypto ikev1 policy 150
authentication pre-share
 encryption des
 hash sha
 group 2
lifetime 86400
telnet 0.0.0.0 0.0.0.0 mgmt
telnet timeout 15
ssh stricthostkeycheck
ssh 0.0.0.0 0.0.0.0 mgmt
ssh timeout 5
ssh version 2
ssh key-exchange group dh-group1-sha1 console timeout \theta
threat-detection basic-threat
threat-detection statistics access-list
no threat-detection statistics tcp-intercept
group-policy VPN-CLIENT-1 internal
group-policy VPN-CLIENT-1 attributes
vpn-tunnel-protocol ikev1
group-policy GP-VPN-ACCORP-CONTOSO internal
group-policy GP-VPN-ACCORP-CONTOSO attributes
vpn-tunnel-protocol ikev1
dynamic-access-policy-record DfltAccessPolicy
username cisco password 3USUcOPFUiMCO4Jk encrypted privilege 15
tunnel-group 203.0.113.10 type ipsec-121
tunnel-group 203.0.113.10 type Ipset-11
tunnel-group 203.0.113.10 general-attributes
default-group-policy GP-VPN-ACCORP-CONTOSO
tunnel-group 203.0.113.10 ipsec-attributes
ikev1 pre-shared-key *****
 isakmp keepalive disable
class-map inspection_default
 match default-inspection-traffic
policy-map type inspect dns migrated_dns_map_2
 parameters
   message-length maximum client auto
  message-length maximum 512
  no tcp-inspection
policy-map global_policy
 class inspection_default
inspect ftp
inspect h323 h225
inspect h323 ras
inspect ip-options
  inspect netbios inspect rsh
   inspect rtsp
  inspect skinny inspect esmtp
   inspect sqlnet
  inspect sunrpc
inspect tftp
inspect sip
  inspect xdmcp
inspect dns migrated_dns_map_2
policy-map type inspect dns migrated_dns_map_3
 parameters
  message-length maximum client auto
   message-length maximum 512
no tcp-inspection
policy-map type inspect dns migrated_dns_map_1
  message-length maximum client auto message-length maximum 512
  no tcp-inspection
service-policy global_policy global prompt hostname context
no call-home reporting anonymous
call-home
 profile CiscoTAC-1
  no active
destination address http https://tools.cisco.com/its/service/oddce/services/DDCEService
  destination address email callhome@cisco.com
 profile License
   destination address http https://tools.cisco.com/its/service/oddce/services/DDCEService
   destination transport-method http
Cryptochecksum:3cbfc186087e4a8bae94a95c334227e0
```

Contoso Ltd. Firewall Configuration:

```
: Saved
: Serial Number: 9ABGNBVCP85
                  ASAv, 2048 MB RAM, CPU Pentium II 3600 MHz
ASA Version 9.6(2)
hostname ASA-2
enable password 2KFQnbNIdI.2KYOU encrypted
xlate per-session deny tcp any4 any4
xlate per-session deny tcp any4 any6
xlate per-session deny tcp any6 any4
xlate per-session deny tcp any6 any6 xlate per-session deny udp any4 any4 eq domain xlate per-session deny udp any4 any6 eq domain
xlate per-session deny udp any6 any4 eq domain
xlate per-session deny udp any6 any6 eq domain
passwd 2KFQnbNIdI.2KYOU encrypted
{\tt interface \ GigabitEthernet0/0}
 description to SW-2
 duplex full
 no nameif
 no security-level
 no ip address
interface GigabitEthernet0/0.5
 vlan 5
nameif Inside
 security-level 100
 ip address 172.17.1.1 255.255.255.0
interface GigabitEthernet0/0.10
 nameif DMZ
 security-level 50
 ip address 172.31.255.1 255.255.255.0
interface GigabitEthernet0/1
 description to Internet-2
 duplex full
 nameif Outside
 security-level 0
 ip address 203.0.113.10 255.255.255.128
interface Management0/0
 description OOB Management
duplex full
 management-only
 nameif mgmt
 security-level 100
 ip address 172.16.1.74 255.255.255.0
ftp mode passive
same-security-traffic permit inter-interface object network 172.17.1.0 subnet 172.17.1.0 255.255.255.0
object network CONTOSO-DMZ-SERVER-1
 host 172.31.255.10
object network PUBLIC-203.0.113.30
host 203.0.113.30
object network VPN-ACME-CLIENT-1
 host 192.0.2.100
object network VPN-ACME-CLIENT-2
host 192.0.2.50
object network PUBLIC-203.0.113.50
 host 203.0.113.50
object-group network VPN-LOCAL-CONTOSO-ACME
network-object object PUBLIC-203.0.113.30
network-object object PUBLIC-203.0.113.50
object-group network VPN-REMOTE-CONTOSO-ACME
network-object object VPN-ACME-CLIENT-1
 network-object object VPN-ACME-CLIENT-2
access-list Outside access_in extended permit icmp any object 172.17.1.0 echo-reply access-list ACL-VPN-CONTOSO-ACME extended permit ip object-group VPN-LOCAL-CONTOSO-ACME object-group VPN-REMOTE-CONTOSO-ACME
pager lines 23
logging enable logging asdm informational
mtu Inside 1500
mtu DMZ 1500
mtu Outside 1500
mtu mgmt 1500
no failover
```

```
no monitor-interface service-module icmp unreachable rate-limit 1 burst-size 1
no asdm history enable
arp timeout 14400
no arp permit-nonconnected
arp rate-limit 8192
nat (Outside,DMZ) source static VPN-ACME-CLIENT-1 VPN-ACME-CLIENT-1 destination static PUBLIC-203.0.113.30 CONTOSO-DMZ-SERVER-1 no-proxy-arp nat (DMZ,Outside) source static CONTOSO-DMZ-SERVER-1 PUBLIC-203.0.113.50 destination static VPN-ACME-CLIENT-2 VPN-ACME-CLIENT-2 no-proxy-arp
nat (Inside,Outside) source dynamic 172.17.1.0 interface
access-group Outside_access_in in interface Outside route Outside 0.0.0.0 0.0.0.0 203.0.113.1 1
timeout xlate 3:00:00
timeout pat-xlate 0:00:30
timeout conn 1:00:00 half-closed 0:10:00 udp 0:02:00 sctp 0:02:00 icmp 0:00:02
timeout sunrpc 0:10:00 h323 0:05:00 h225 1:00:00 mgcp 0:05:00 mgcp-pat 0:05:00
timeout sip 0:30:00 sip_media 0:02:00 sip-invite 0:03:00 sip-disconnect 0:02:00 timeout sip-provisional-media 0:02:00 uauth 0:05:00 absolute
timeout tcp-proxy-reassembly 0:01:00
timeout floating-conn 0:00:00
timeout conn-holddown 0:00:15
user-identity default-domain LOCAL
aaa authentication ssh console LOCAL
http server enable
http 0.0.0.0 0.0.0.0 mgmt
no snmp-server location
no snmp-server contact
crypto ipsec ikev1 transform-set ESP-AES-128-SHA esp-aes esp-sha-hmac crypto ipsec ikev1 transform-set ESP-AES-128-MD5 esp-aes esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-AES-192-SHA esp-aes-192 esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-AES-192-MD5 esp-aes-192 esp-md5-hmac
crypto ipsec ikevi transform-set ESP-AES-256-SHA esp-aes-256 esp-mds-hmac crypto ipsec ikevi transform-set ESP-AES-256-SHA esp-aes-256 esp-mds-hmac crypto ipsec ikevi transform-set ESP-AES-256-MD5 esp-aes-256 esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-AES-128-SHA-TRANS esp-aes esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-AES-128-SHA-TRANS mode transport
crypto ipsec ikev1 transform-set ESP-AES-128-MD5-TRANS esp-aes esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-AES-128-MD5-TRANS mode transport crypto ipsec ikev1 transform-set ESP-AES-192-SHA-TRANS esp-aes-192 esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-AES-192-SHA-TRANS mode transport
crypto ipsec ikev1 transform-set ESP-AES-192-MD5-TRANS esp-aes-192 esp-md5-hmac crypto ipsec ikev1 transform-set ESP-AES-192-MD5-TRANS mode transport
crypto ipsec ikev1 transform-set ESP-AES-256-SHA-TRANS esp-aes-256 esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-AES-256-SHA-TRANS mode transport crypto ipsec ikev1 transform-set ESP-AES-256-MD5-TRANS esp-aes-256 esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-AES-256-MD5-TRANS mode transport
crypto ipsec ikev1 transform-set ESP-3DES-SHA esp-3des esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-3DES-MD5 esp-3des esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-3DES-SHA-TRANS esp-3des esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-3DES-SHA-TRANS mode transport
crypto ipsec ikev1 transform-set ESP-3DES-MD5-TRANS esp-3des esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-3DES-MD5-TRANS mode transport
crypto ipsec ikev1 transform-set ESP-DES-SHA esp-des esp-sha-hmac crypto ipsec ikev1 transform-set ESP-DES-MD5 esp-des esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-DES-SHA-TRANS esp-des esp-sha-hmac
crypto ipsec ikev1 transform-set ESP-DES-SHA-TRANS mode transport crypto ipsec ikev1 transform-set ESP-DES-MD5-TRANS esp-des esp-md5-hmac
crypto ipsec ikev1 transform-set ESP-DES-MD5-TRANS mode transport
crypto ipsec security-association pmtu-aging infinite crypto map CM-CONTOSO-ACME 1 match address ACL-VPN-CONTOSO-ACME
crypto map CM-CONTOSO-ACME 1 set peer 192.0.2.10
crypto map CM-CONTOSO-ACME 1 set ikev1 transform-set ESP-AES-128-SHA
crypto map CM-CONTOSO-ACME 1 set nat-t-disable
crypto map CM-CONTOSO-ACME interface Outside
crypto ca trustpoint _SmartCallHome_ServerCA
 no validation-usage
 crl configure
crypto ca trustpool policy
 auto-import
crypto ca certificate chain _SmartCallHome_ServerCA
 certificate ca 6ecc7aa5a7032009b8cebcf4e952d491
308205ec 308204d4 a0030201 0202106e cc7aa5a7 032009b8 cebcf4e9 52d49130
     0d06092a 864886f7 0d010105 05003081 ca310b30 09060355 04061302 55533117
     30150603 55040a13 0e566572 69536967 6e2c2049 6e632e31 1f301d06 0355040b
     13165665 72695369 676e2054 72757374 204e6574 776f726b 313a3038 06035504
     0b133128 63292032 30303620 56657269 5369676e 2c20496e 632e202d 20466f72
     20617574 686f7269 7a656420 75736520 6f6e6c79 31453043 06035504 03133c56
     65726953 69676e20 436c6173 73203320 5075626c 69632050 72696d61 72792043
     65727469 66696361 74696f6e 20417574 686f7269 7479202d 20473530 1e170d31
     30303230 38303030 3030305a 170d3230 30323037 32333539 35395a30 81b5310b 30090603 55040613 02555331 17301506 0355040a 130e5665 72695369 676e2c20
     496e632e 311f301d 06035504 0b131656 65726953 69676e20 54727573 74204e65
     74776f72 6b313b30 39060355 040b1332 5465726d 73206f66 20757365 20617420
     68747470 733a2f2f 7777772e 76657269 7369676e 2e636f6d 2f727061 20286329
     3130312f 302d0603 55040313 26566572 69536967 6e20436c 61737320 33205365
     63757265 20536572 76657220 4341202d 20473330 82012230 0d06092a 864886f7
     0d010101 05000382 010f0030 82010a02 82010100 b187841f c20c45f5 bcab2597
     a7ada23e 9cbaf6c1 39b88bca c2ac56c6 e5bb658e 444f4dce 6fed094a d4af4e10 9c688b2e 957b899b 13cae234 34c1f35b f3497b62 83488174 d188786c 0253f9bc
     7f432657 5833833b 330a17b0 d04e9124 ad867d64 12dc744a 34a11d0a ae961d0b 15fca34b 3bce6388 d0f82d0c 948610ca b69a3dca eb379c00 48358629 5078e845 63cd1941 4ff595ec 7b98d4c4 71b350be 28b38fa0 b9539cf5 ca2c23a9 fd1406e8
     18b49ae8 3c6e81fd e4cd3536 b351d369 ec12ba56 6e6f9b57 c58b14e7 0ec79ced
```

4a546ac9 4dc5bf11 b1ae1c67 81cb4455 33997f24 9b3f5345 7f861af3 3cfa6d7f

```
81f5b84a d3f58537 1cb5a6d0 09e4187b 384efa0f 02030100 01a38201 df308201 db303406 082b0601 05050701 01042830 26302406 082b0601 05050730 01861868
     7474703a 2f2f6f63 73702e76 65726973 69676e2e 636f6d30 12060355 1d130101
    ff040830 060101ff 02010030 70060355 1d200469 30673065 060b6086 480186f8 45010717 03305630 2806082b 06010505 07020116 1c687474 70733a2f 2f777777
     2e766572 69736967 6e2e636f 6d2f6370 73302a06 082b0601 05050702 02301e1a
     1c687474 70733a2f 2f777777 2e766572 69736967 6e2e636f 6d2f7270 61303406
     03551d1f 042d302b 3029a027 a0258623 68747470 3a2f2f63 726c2e76 65726973
     06976e2e 636f6d2f 70636133 2d67352e 63726c30 0e060355 1d0f0101 f040403
02010630 6d06082b 06010505 07010c04 61305fa1 5da05b30 59305730 55160969
6d616765 2f676966 3021301f 30070605 2b0e0302 1a04148f e5d31a86 ac8d8e6b
     c3cf806a d448182c 7b192e30 25162368 7474703a 2f2f6c6f 676f2e76 65726973 69676e2e 636f6d2f 76736c6f 676f2e67 69663028 0603551d 11042130 1fa41d30
     1b311930 17060355 04031310 56657269 5369676e 4d504b49 2d322d36 301d0603
     551d0e04 1604140d 445c1653 44c1827e 1d20ab25 f40163d8 be79a530 1f060355
     1d230418 30168014 7fd365a7 c2ddecbb f03009f3 4339fa02 af333133 300d0609 2a864886 f70d0101 05050003 82010100 0c8324ef ddc30cd9 589cfe36 b6eb8a80
     4bd1a3f7 9df3cc53 ef829ea3 a1e697c1 589d756c e01d1b4c fad1c12d 05c0ea6e
     b2227055 d9203340 3307c265 83fa8f43 379bea0e 9a6c70ee f69c803b d937f47a
     6decd018 7d494aca 99c71928 a2bed877 24f78526 866d8705 404167d1 273aeddc
    481d22cd 0b0b8bbc f4b17bfd b499a8e9 762ae11a 2d876e74 d388dd1e 22c6df16
b62b8214 0a945cf2 50ecafce ff62370d ad65d306 4153ed02 14c8b558 28a1ace0
     5becb37f 954afb03 c8ad26db e6667812 4ad99f42 fbe198e6 42839b8f 8f6724e8
     6119b5dd cdb50b26 058ec36e c4c875b8 46cfe218 065ea9ae a8819a47 16de0c28
    6c2527b9 deb78458 c61f381e a4c4cb66
crypto ikev1 enable Outside
crypto ikev1 policy 20
 authentication rsa-sig
 encryption aes-256
 hash sha
 group 2
 lifetime 86400
crypto ikev1 policy 30
 authentication pre-share
 encryption aes-256
 hash sha
 group 2
 lifetime 86400
crypto ikev1 policy 50
 authentication rsa-sig
 encryption aes-192
 hash sha
 group 2
 lifetime 86400
crypto ikev1 policy 60
 authentication pre-share
 encryption aes-192
 hash sha
 group 2
 lifetime 86400
crypto ikev1 policy 80
 authentication rsa-sig
 encryption aes
 hash sha
 lifetime 86400
crypto ikev1 policy 90
 authentication pre-share
 encryption aes
 hash sha
 group 2
lifetime 86400
crypto ikev1 policy 110
 authentication rsa-sig
 encryption 3des
 hash sha
 group 2
 lifetime 86400
crypto ikev1 policy 120
 authentication pre-share
 encryption 3des
 hash sha
 group 2
 lifetime 86400
crypto ikev1 policy 140
 authentication rsa-sig
 encryption des
 hash sha
 group 2
 lifetime 86400
crypto ikev1 policy 150
 authentication pre-share
 encryption des
 group 2
 lifetime 86400
telnet 0.0.0.0 0.0.0.0 mgmt
telnet timeout 15
ssh stricthostkevcheck
ssh 0.0.0.0 0.0.0.0 mgmt
ssh timeout 5
```

```
ssh version 2 ssh key-exchange group dh-group1-sha1 console timeout 0 \,
threat-detection basic-threat
threat-detection statistics access-list
no threat-detection statistics tcp-intercept
group-policy VPN-CLINET-2 internal group-policy VPN-CLINET-2 attributes
  vpn-tunnel-protocol ikev1
group-policy GP-VPN-ACME-CONTOSO internal group-policy GP-VPN-ACME-CONTOSO attributes
  vpn-tunnel-protocol ikev1
dynamic-access-policy-record DfltAccessPolicy
username cisco password 3USUcOPFUiMCO4Jk encrypted privilege 15
tunnel-group 192.0.2.10 type ipsec-121
tunnel-group 192.0.2.10 general-attributes default-group-policy GP-VPN-ACME-CONTOSO
tunnel-group 192.0.2.10 ipsec-attributes
ikev1 pre-shared-key *****
isakmp keepalive disable
class-map inspection_default
  match default-inspection-traffic
policy-map type inspect dns migrated_dns_map_1
 parameters
message-length maximum client auto
message-length maximum 512
   no tcp-inspection
policy-map global_policy
  class inspection_default
   inspect dns migrated_dns_map_1
inspect ftp
inspect h323 h225
   inspect h323 ras
inspect ip-options
inspect netbios
   inspect rsh
inspect rtsp
inspect skinny
   inspect esmtp
inspect sqlnet
inspect sunrpc
   inspect tftp
   inspect sip
inspect xdmcp
service-policy global_policy global prompt hostname context
no call-home reporting anonymous
call-home
 profile CiscoTAC-1
   no active
destination address http https://tools.cisco.com/its/service/oddce/services/DDCEService
  destination address email callhome@cisco.com
  profile License
   \label{thm:condition} destination address \ http \ https://tools.cisco.com/its/service/oddce/services/DDCEService \ destination \ transport-method \ http
Cryptochecksum:5fe4aaba379d51f8e8fb50132d3bf9af
: end
```