

Настройка IPSec между маршрутизаторами Cisco IOS и клиентом VPN Cisco, использующим доверительные сертификаты

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Введение

Этот документ демонстрирует установку туннеля IPSec VPN между маршрутизатором IOS® Cisco и Cisco VPN Client 3.x, при использовании доверенных сертификатов. Эта функция поддерживается в Cisco IOS Software Releases 12.2 (8) T и позднее. Пример конфигурации в этом документе также выделяет процедуру регистрации центра сертификации (CA) и для маршрутизатора Cisco IOS и для использования Cisco VPN Client, Поручают как сервер CA.

Перед началом работы

Условные обозначения

[Дополнительные сведения об условных обозначениях см. в документе Технические рекомендации Cisco. Условные обозначения.](#)

Предварительные условия

Для данного документа отсутствуют предварительные условия.

Используемые компоненты

Сведения в этом документе основаны на версиях оборудования и программного обеспечения, указанных ниже.

- Маршрутизатор Cisco 3640, запущенный с программным обеспечением Cisco IOS версии 12.2(8)T (IOS образ: c3640-ik8o3s-mz.122-8.T)
- Cisco VPN Client 4.0.1 на ПК, выполняющем Windows 2000
- Поручать сервер CA, используемый в качестве сервера CA

Сведения, содержащиеся в данном документе, были получены с устройств в специальной лабораторной среде. Все устройства, описанные в данном документе, были запущены с конфигурацией по умолчанию. При работе с реальной сетью необходимо полностью осознавать возможные результаты использования всех команд.

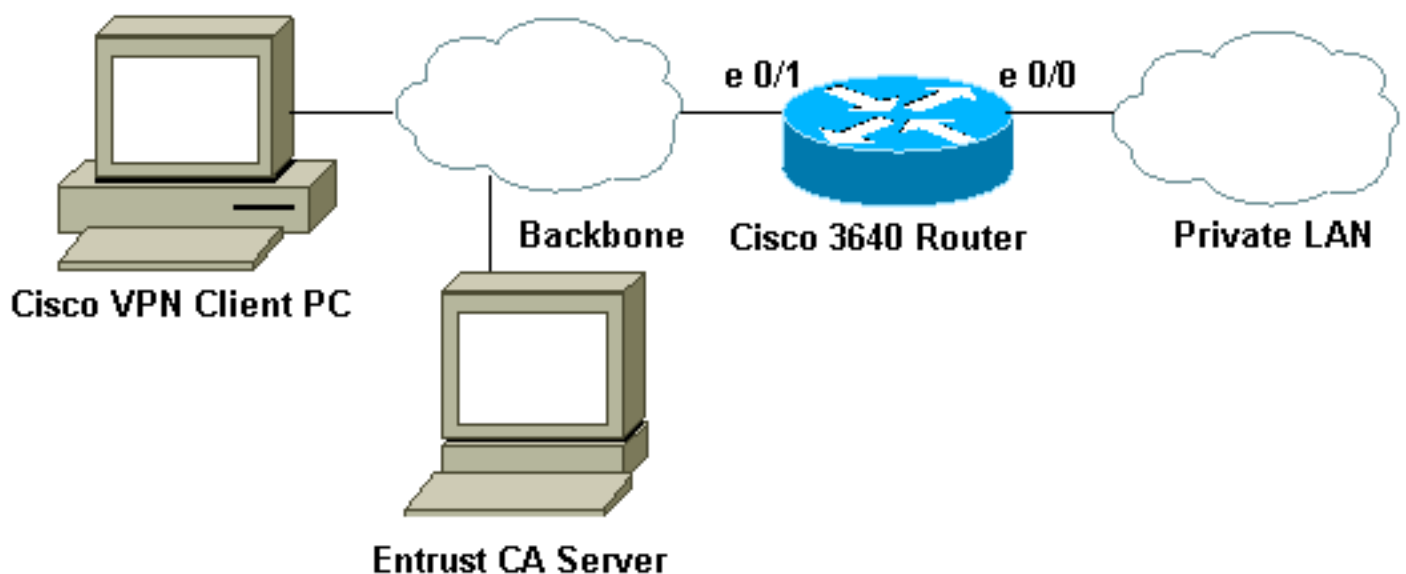
Настройка

В этом разделе содержатся сведения о настройке функций, описанных в этом документе.

Примечание: [Поиск дополнительной информации о командах в данном документе можно выполнить с помощью средства "Command Lookup" \(Поиск команд\) \(только для зарегистрированных клиентов\).](#)

Схема сети

В данном документе используется сетевая установка, показанная на следующей схеме.



Конфигурации

В данном документе используются следующие конфигурации.

- [Конфигурации маршрутизатора](#)
- [Хранилище сертификатов для Cisco VPN Client](#)
- [Настройка VPN-подключение на Cisco VPN Client](#)

Конфигурации маршрутизатора

- [Хранилище сертификатов на маршрутизаторе IOS 3640](#)
- [3640 Конфигураций](#)

Хранилище сертификатов на маршрутизаторе IOS 3640

```
!--- Define a hostname and domain name for the router.
!--- The fully qualified domain name (FQDN) will be used
!--- as the identity of the router during certificate
enrollment. 3640(config)#ip domain-name sjpki.com !---
Generate RSA (encryption and authentication) keys.
3640(config)#crypto key generate rsa The name for the
keys will be: 3640.sjpki.com Choose the size of the key
modulus in the range of 360 to 2048 for your General
Purpose Keys. Choosing a key modulus greater than 512
may take a few minutes. How many bits in the modulus
[512]: % Generating 512 bit RSA keys ...[OK] !--- Define
the CA identity. Note that in Cisco IOS Software !---
Release 12.2(8)T, the crypto ca trustpoint command !---
replaces the crypto ca identity command from previous !-
-- Cisco IOS versions. So that the router will try to
enroll !--- to the CA server automatically when its
certificates !--- expire, auto-enroll was turned on.
3640(config)#crypto ca trustpoint SJPKI 3640(ca-
trustpoint)# enrollment url http://171.69.89.126
3640(ca-trustpoint)#enrollment mode ra 3640(ca-
trustpoint)#crl query ldap://171.69.89.126 3640(ca-
trustpoint)#serial-number none 3640(ca-trustpoint)#ip-
address none 3640(ca-trustpoint)#password revokeme
3640(ca-trustpoint)#auto-enroll 3640(ca-
trustpoint)#usage ike !--- Retrieves CA and registration
authority (RA) !--- certificates from the CA server.
3640(config)#crypto ca authen SJPKI Certificate has the
following attributes: Fingerprint: 0D8E6CF8 C63D7068
3BA4B90A 16054812 % Do you accept this certificate?
[yes/no]: y Trustpoint CA certificate accepted.
3640(config)# !--- Enroll to CA server and get router's
own certificate. 3640(config)#crypto ca enroll SJPKI % %
Start certificate enrollment .. % The subject name in
the certificate will be: 3640.sjpki.com % Certificate
request sent to Certificate Authority % The certificate
request fingerprint will be displayed. % The 'show
crypto ca certificate' command will also show the
fingerprint. 3640(config)# Fingerprint: D9CE886E
B4B76115 B7149128 6658E7CA 00:58:17: CRYPTO_PKI: status
= 102: certificate request pending 00:58:39: CRYPTO_PKI:
status = 102: certificate request pending 00:59:42:
%CRYPTO-6-CERTRET: Certificate received from Certificate
Authority
```

3640 Конфигураций

```
version 12.2
service timestamps debug uptime
service timestamps log uptime
no service password-encryption
!
hostname 3640
!
logging buffered 4096 debugging
!--- Define local authentication as the authentication
method !--- for Internet Key Exchange (IKE) XAUTH. !---
Note that "ClientAuth" is the tag associated with the
crypto map. aaa new-model aaa authentication login
ClientAuth local aaa authorization network ClientAuth
local aaa session-id common enable secret 5
$l$V49A$bfCGOfwF7qdKQqZxXCIN770 ! username vpnclient
```

```
password 0 cisco123 ip subnet-zero ! ! ip domain-name
sjpki.com ! ip audit notify log ip audit po max-events
100 ! crypto ca trustpoint SJPKI enrollment mode ra
enrollment url http://171.69.89.126:80 usage ike serial-
number none ip-address none password 7
1405171D030F2F2621 crl query ldap://171.69.89.126 auto-
enroll crypto ca certificate chain SJPKI certificate ca
3C9CC54B 308202E4 3082024D A0030201 0202043C 9CC54B30
0D06092A 864886F7 0D010105 0500302D 310B3009 06035504
06130275 73310E30 0C060355 040A1305 63697363 6F310E30
0C060355 040B1305 736A7670 6E301E17 0D303230 33323331
37343132 355A170D 32323033 32333138 31313235 5A302D31
0B300906 03550406 13027573 310E300C 06035504 0A130563
6973636F 310E300C 06035504 0B130573 6A76706E 30819F30
0D06092A 864886F7 0D010101 05000381 8D003081 89028181
00AD0B5B DACB1B4B 6CBE7138 2A97AA1D A2D3565C 56EE74D7
32A61D4F 7FBA7E53 44A4C8CC 94E16825 99369D85 7B6F5A15
60D9AD92 8AF8800E E3E70E01 757FD5DE 470C4996 A379181A
00709FE5 9C7C5A14 959F77B1 A746F8F7 1F0077FB 99E54DAC
8F3C355F 31964497 F36E7511 EF09B23D 52CDCD2F 50E471B7
F1FFCB05 4E6EB7F4 71020301 0001A382 010F3082 010B3011
06096086 480186F8 42010104 04030200 07304F06 03551D1F
04483046 3044A042 A040A43E 303C310B 30090603 55040613
02757331 0E300C06 0355040A 13056369 73636F31 0E300C06
0355040B 1305736A 76706E31 0D300B06 03550403 13044352
4C31302B 0603551D 10042430 22800F32 30303230 33323331
37343132 355A810F 32303232 30333233 31383131 32355A30
0B060355 1D0F0404 03020106 301F0603 551D2304 18301680
14F7931A 99D0E447 69928CC0 A9FF647D F53E627F 5A301D06
03551D0E 04160414 F7931A99 D0E44769 928CC0A9 FF647DF5
3E627F5A 300C0603 551D1304 05300301 01FF301D 06092A86
4886F67D 07410004 10300E1B 0856352E 303A342E 30030204
90300D06 092A8648 86F70D01 01050500 03818100 3C6AB8D8
9E3F140D D5D051AB 7032AF51 BD357804 4D7FA32C EB42D1EA
2AFA1EEF 548C175E FAB9B4C7 DE0E0744 0916FC71 B87768F3
28B605E9 A054900B 5E249835 3112E7FF F0B579F5 F06858F8
5940CA9C E0FC4E98 66C50A40 2ABEAF37 9DB339C0 F98EDC0C
E28C82CD B2465D46 5E3AB18E 0FEEEE09A 37D58506 72AE135E
3B48662D quit certificate ra-encrypt 3C9CC573 308202E1
3082024A A0030201 0202043C 9CC57330 0D06092A 864886F7
0D010105 0500302D 310B3009 06035504 06130275 73310E30
0C060355 040A1305 63697363 6F310E30 0C060355 040B1305
736A7670 6E301E17 0D303230 33323332 32353234 355A170D
30353033 32333233 32323435 5A305631 0B300906 03550406
13027573 310E300C 06035504 0A130563 6973636F 310E300C
06035504 0B130573 6A76706E 31273025 06035504 03131E65
6E747275 73745650 4E636F6E 6E656374 6F722045 6E747275
7374504B 4930819F 300D0609 2A864886 F70D0101 01050003
818D0030 81890281 8100AC0B BA3BC6CF 7C303853 C1C191F6
5CD91A41 2F6143B4 6662D7CB A4CD6633 45DBAEC7 7664F88B
D62C5DA9 6087C097 5F498BF5 3DDC7ACF 1F4BFA30 DA112550
841FC5AD 45AEEE65 EA1EB935 473BF5F4 3F6FDE88 E05D7097
FD8C4525 50ECE9F7 4B3EA152 0DDB8867 A7DB5FEB D7886405
4DCB7486 9D8E1E96 5E3495D8 989017F1 CA7D0203 010001A3
81E43081 E1300B06 03551D0F 04040302 0520301B 0603551D
09041430 12301006 092A8648 86F67D07 441D3103 02010130
4F060355 1D1F0448 30463044 A042A040 A43E303C 310B3009
06035504 06130275 73310E30 0C060355 040A1305 63697363
6F310E30 0C060355 040B1305 736A7670 6E310D30 0B060355
04031304 43524C31 301F0603 551D2304 18301680 14F7931A
99D0E447 69928CC0 A9FF647D F53E627F 5A301D06 03551D0E
04160414 2DDB5231 39027684 9C982D0D E4528CBC CFFB97B3
30090603 551D1304 02300030 1906092A 864886F6 7D074100
040C300A 1B045635 2E300302 04B0300D 06092A86 4886F70D
```

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C6FE9EB1	41E3728A	0FB37EE2	E0CE0071	6194EDF8	D21A9DED
A7372E20	6FFE0468	014ED8EB	018FBB96	A683B210	A32C0673
D2C2785A	818C8EC8	2B9549EF	356C96BF	8F396064	1F6D7B50
D3354171	ACA45AE7	D550F42A	30922C78	E6	quit certificate
ra-sign	3C9CC574	30820310	30820279	A0030201	0202043C
9CC57430	0D06092A	864886F7	0D010105	0500302D	310B3009
06035504	06130275	73310E30	0C060355	040A1305	63697363
6F310E30	0C060355	040B1305	736A7670	6E301E17	0D303230
33323332	32353234	355A170D	30353033	32333233	32323435
5A305631	0B300906	03550406	13027573	310E300C	06035504
0A130563	6973636F	310E300C	06035504	0B130573	6A76706E
31273025	06035504	03131E65	6E747275	73745650	4E636F6E
6E656374	6F722045	6E747275	7374504B	4930819F	300D0609
2A864886	F70D0101	01050003	818D0030	81890281	8100AC87
EF7C0E8E	2120B81F	D231EE87	78CB4238	9F5E5F3B	D1D1C9F7
B35993EF	7118104A	26C38AB4	7DDE9B1D	3A685A73	9788A221
AC3199D7	0D91D315	2276DAF7	F58C5A1C	690B3CC8	7C1CBE03
8BD81993	F4644D30	B3388741	A0A0C4FC	BA469358	08C39FA0
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F67D0744	1D310302	0101304F	0603551D	1F044830	463044A0
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06035504	0A130563	6973636F	310E300C	06035504	0B130573
6A76706E	310D300B	06035504	03130443	524C3130	1F060355
1D230418	30168014	F7931A99	D0E44769	928CC0A9	FF647DF5
3E627F5A	301D0603	551D0E04	160414AA	2E19FD77	6824DE9B
41DB46FC	15229D09	48D4EF30	09060355	1D130402	30003019
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849D4F9A	F22CDA7C	203E19C6	125AC104	608E37DF	600F97B9
B4DCF0CE	quit certificate	3C9CC602	308202C0	30820229	
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0500302D	310B3009	06035504	06130275	73310E30	0C060355
040A1305	63697363	6F310E30	0C060355	040B1305	736A7670
6E301E17	0D303230	34303832	32323534	365A170D	30333034
30383232	35353436	5A304C31	0B300906	03550406	13027573
310E300C	06035504	0A130563	6973636F	310E300C	06035504
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6A76706E	310D300B	06035504	03130443	524C3130	1F060355
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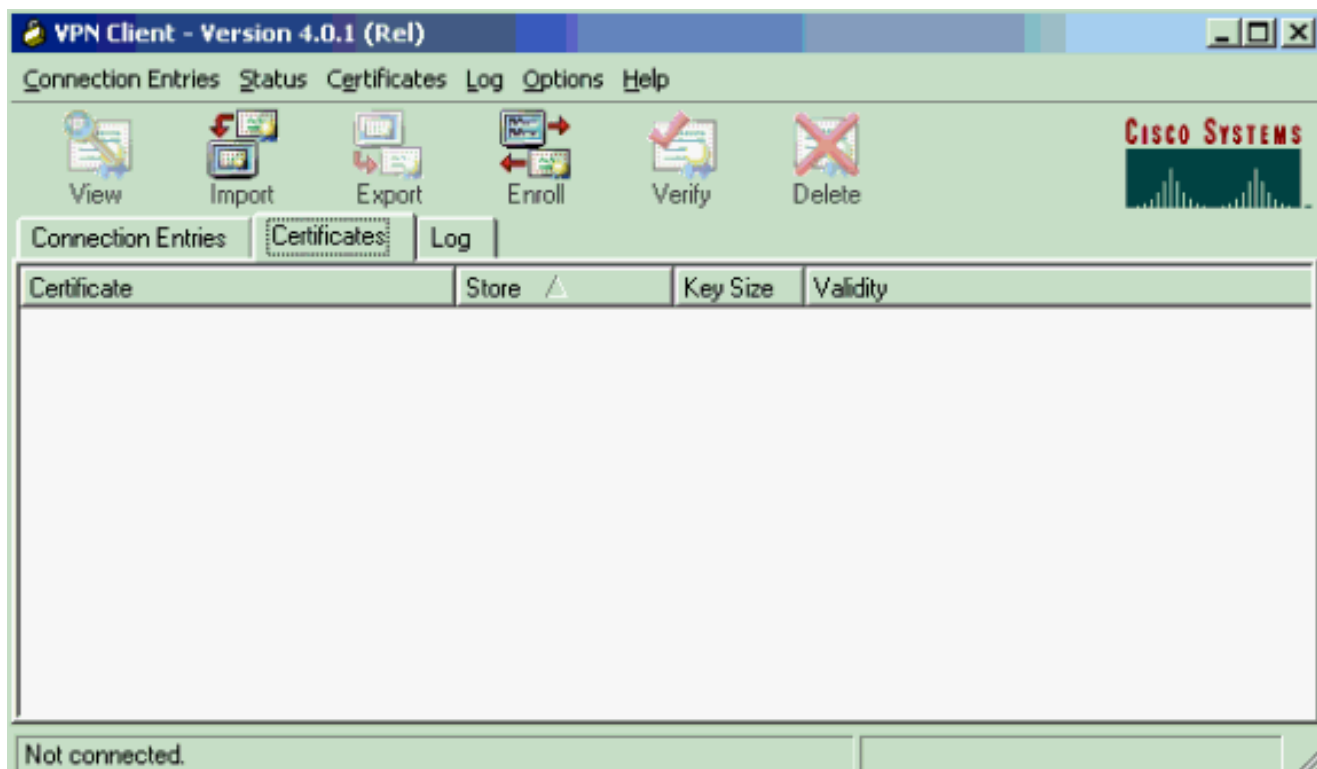
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B999EFB7 029F30FB AC096829 58DC7E13 EE1FA3F6 BAAF794A
0157B0B1 4935CD3A 7B613B65 940412F8 C6301264 A7E53742
75E1E403 quit !--- Define Internet Security Association
and Key Management !--- Protocol (ISAKMP) policy. The
IKE authentication method !--- "rsa-sig" will be used,
but it doesn't show up in !--- the configuration since
it is the default method. crypto isakmp policy 1 group 2
!--- Use FQDN as the ISAKMP identity. crypto isakmp
identity hostname !--- Define the VPN group for Cisco
VPN Client. !--- The VPN group name "sjvpn" matches !---
the Organizational Unit (OU) name of the client's
certificate. !--- Access list "acl 100" defines the
split-tunneling traffic, and !--- "vpnpool" defines the
IP pool from which the VPN Client !--- receives its IP
address during the IKE negotiation. crypto isakmp client
configuration group sjvpn dns 10.1.1.5 wins 10.1.1.5
domain sjpki.com pool vpnpool acl 101 ! !-- Define
crypto map configuration. crypto ipsec transform-set
myset esp-des esp-md5-hmac ! crypto dynamic-map
vpnclient 10 set transform-set myset ! ! crypto map vpn
client authentication list ClientAuth crypto map vpn
isakmp authorization list ClientAuth crypto map vpn
client configuration address respond crypto map vpn 10
ipsec-isakmp dynamic vpnclient ! ! ! fax interface-type
fax-mail mta receive maximum-recipients 0 ! ! interface
Loopback0 ip address 10.1.2.1 255.255.255.0 ! interface
Ethernet0/0 ip address 10.1.3.1 255.255.255.0 no
keepalive half-duplex ! interface Ethernet0/1 ip address
172.16.172.40 255.255.255.240 half-duplex crypto map vpn
! interface BRI1/0 no ip address shutdown ! interface
BRI1/1 no ip address shutdown ! interface BRI1/2 no ip
address shutdown ! interface BRI1/3 no ip address
shutdown ! interface Serial2/0 no ip address shutdown no
fair-queue ! interface Serial2/1 no ip address shutdown
! interface Serial2/2 no ip address shutdown ! interface
Serial2/3 no ip address shutdown ! interface Serial3/0
no ip address shutdown ! interface Serial3/1 no ip
address shutdown ! interface Serial3/2 no ip address
shutdown ! interface Serial3/3 no ip address shutdown !
ip local pool vpnpool 10.1.1.10 10.1.1.50 ip classless
ip route 0.0.0.0 0.0.0.0 172.16.172.33 no ip http server
ip pim bidir-enable ! ! access-list 101 permit ip
10.1.0.0 0.0.255.255 10.1.1.0 0.0.0.255 ! call rsvp-sync
! ! mgcp profile default ! dial-peer cor custom ! ! line
con 0 line aux 0 line vty 0 4 password cisco ! ! end

```

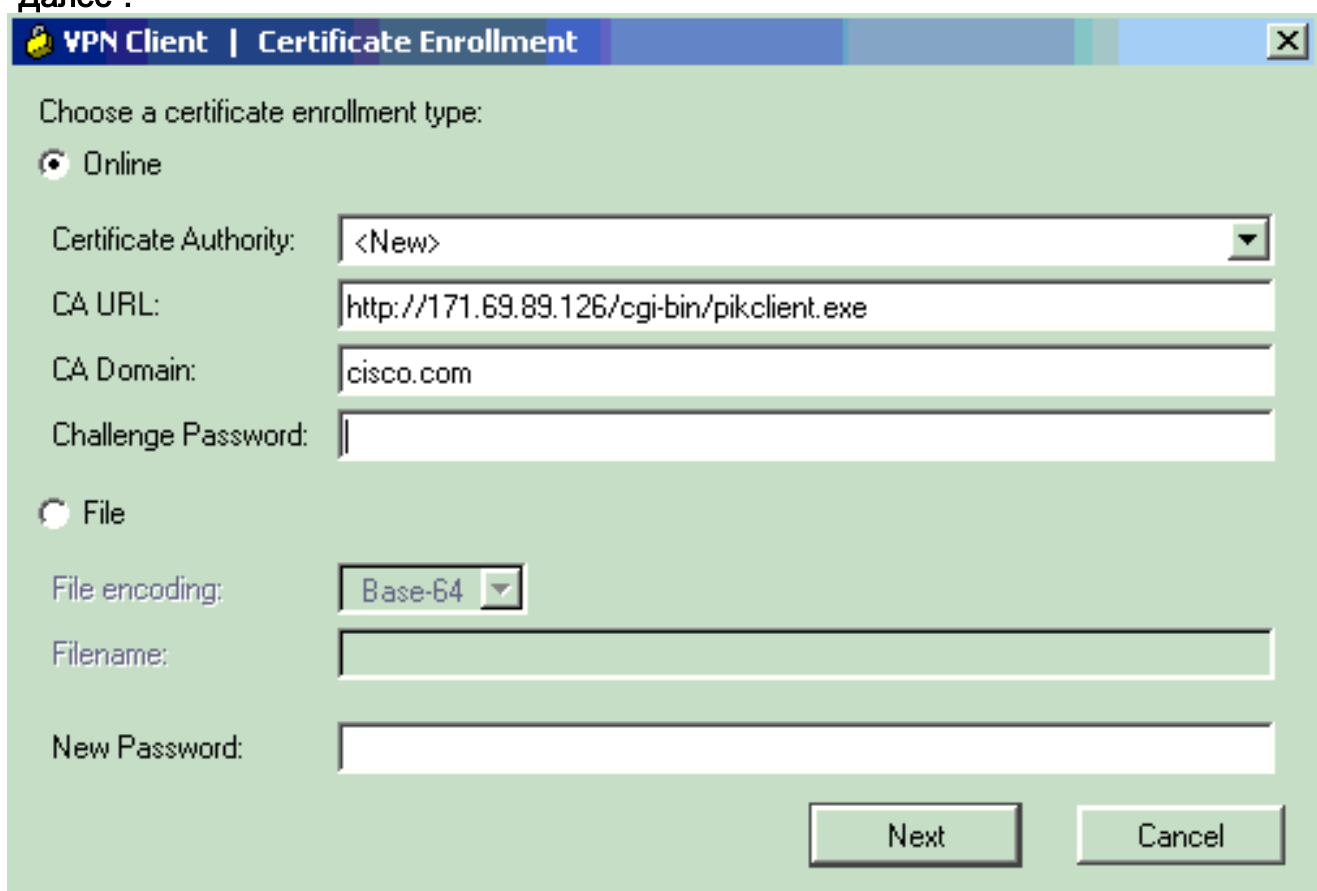
[Хранилище сертификатов для Cisco VPN Client](#)

Следующие снимки экрана демонстрируют, что процедуры использовали зарегистрировать Cisco VPN Client на Доверенные сертификаты. В этом случае мы использовали сетевую регистрацию.

1. Запустите Клиент VPN, выберите вкладку Certificates и нажмите **Enroll**.



2. Выберите **Online** как тип хранилища сертификатов, затем заполните соответствующие поля для URL, домена и пароля. По окончании нажмите кнопку **"Далее"**.



3. Введите свою информацию в поля сертификата. Если необходимо отредактировать информацию о предшествующем экране, нажмите **Back**. В противном случае нажмите **Enroll**, когда вы будете закончены.

Enter certificate fields, "*" denotes a required field:

Name [CN]*: vpnclient

Department [OU]: sjvpn

Company [O]: Cisco Systems, Inc.

State [ST]: CA

Country [C]: US

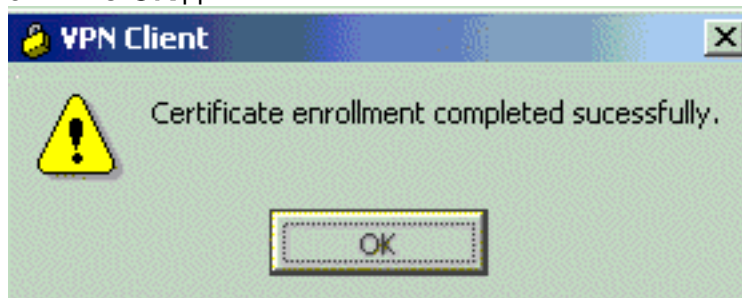
Email [E]:

IP Address:

Domain:

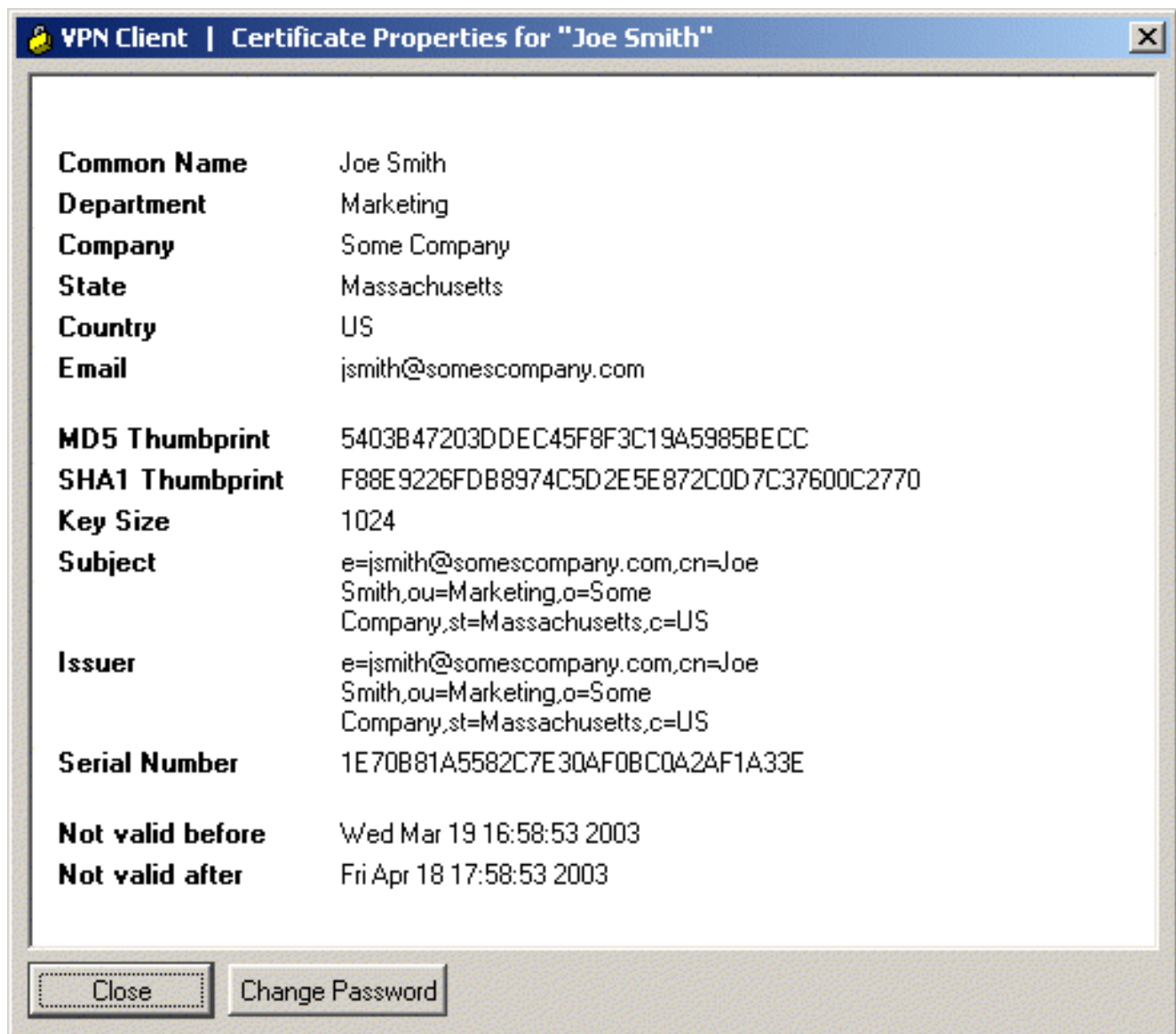
Back Enroll Cancel

4. Когда окно состояния регистрации подтвердит ваш запрос зарегистрироваться к серверу CA, нажмите **OK** для



продолжения.

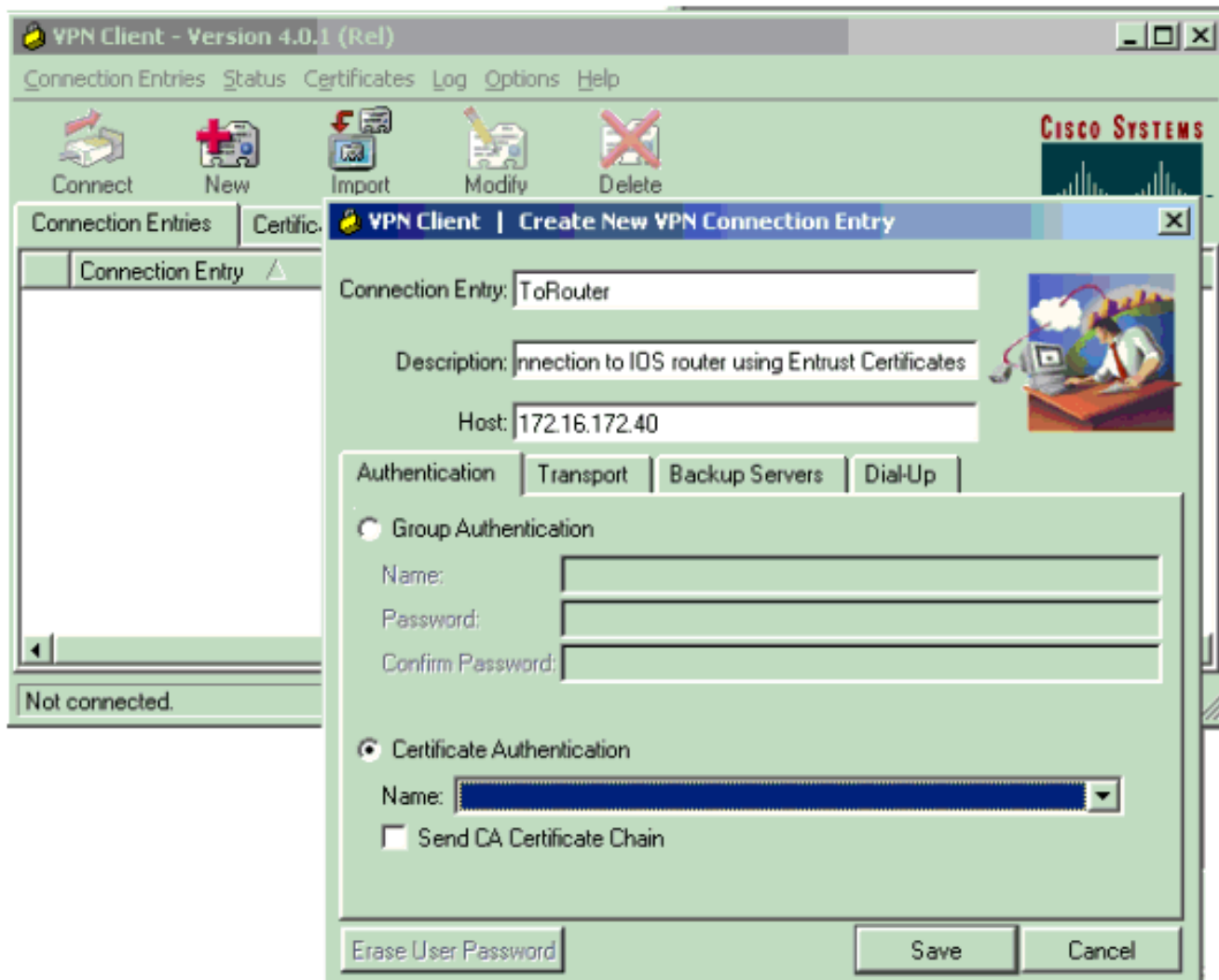
5. После регистрации Клиент VPN должен получить один персональный сертификат, один корневой сертификат CA и два сертификата RA. Экран Digital Certificate проверяет сертификат Клиента VPN. Для просмотра сертификата перейдите к **Certificates> View**. Сертификат должен выглядеть подобным следующему примеру.



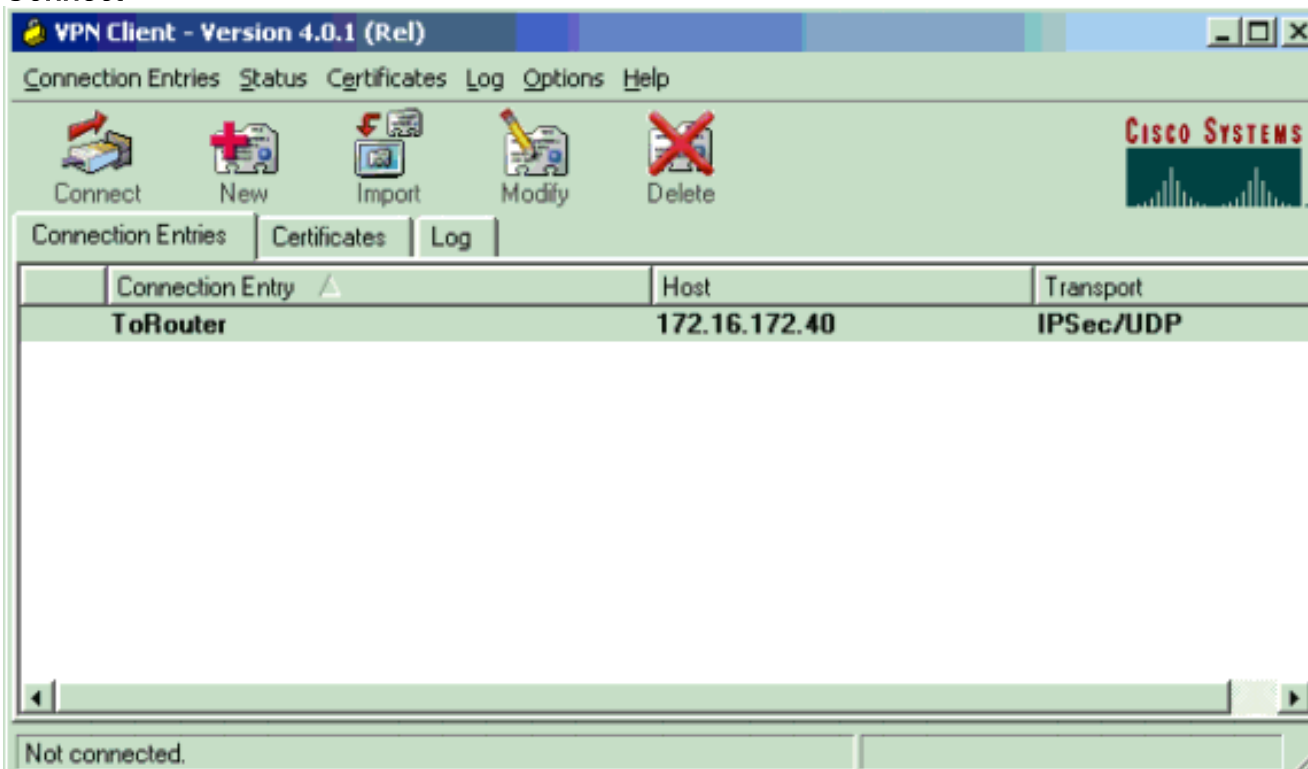
[Настройка VPN-подключение на Cisco VPN Client](#)

Следующие снимки экрана демонстрируют, как настроить новое соединение на Cisco VPN Client к маршрутизатору Cisco IOS.

1. Запустите Клиент VPN, выберите вкладку Connection Entries и нажмите **New** для создания нового соединения.
2. Введите имя соединения, описание и адрес IP - адреса хоста. Поле аутентификации сертификата будет автоматически заполнено с информацией о Клиенте VPN. Нажмите **Save**, когда вы будете закончены.



3. Для соединения выберите запись нового соединения и затем нажмите **Connect**.



[Проверка](#)

В этом разделе содержатся сведения, которые помогают убедиться в надлежащей работе конфигурации.

Некоторые команды show поддерживаются Средством интерпретации выходных данных(только зарегистрированные клиенты), которое позволяет просматривать аналитику выходных данных команды show.

- 3640#**show crypto isakmp sa** dst src state conn-id slot 172.16.172.40 171.69.89.129 QM_IDLE 1 0
- 3640#**show crypto ipsec sa** interface: Ethernet0/1 Crypto map tag: vpn, local addr. 172.16.172.40 local ident (addr/mask/prot/port): (10.1.0.0/255.255.0.0/0/0) remote ident (addr/mask/prot/port): (10.1.1.11/255.255.255.255/0/0) current_peer: 171.69.89.129 PERMIT, flags={} #pkts encaps: 4, #pkts encrypt: 4, #pkts digest 4 #pkts decaps: 17, #pkts decrypt: 17, #pkts verify 17 #pkts compressed: 0, #pkts decompressed: 0 #pkts not compressed: 0, #pkts compr. failed: 0, #pkts decompress failed: 0, #send errors 0, #recv errors 0 local crypto endpt.: 172.16.172.40, remote crypto endpt.: 171.69.89.129 path mtu 1500, media mtu 1500 current outbound spi: E73672A9 inbound esp sas: spi: 0xADA266D3(2913101523) transform: esp-des esp-md5-hmac , in use settings ={Tunnel, } slot: 0, conn id: 2002, flow_id: 3, crypto map: vpn sa timing: remaining key lifetime (k/sec): (4607997/3526) IV size: 8 bytes replay detection support: Y inbound ah sas: inbound pcp sas: outbound esp sas: spi: 0xE73672A9(3879105193) transform: esp-des esp-md5-hmac , in use settings ={Tunnel, } slot: 0, conn id: 2003, flow_id: 4, crypto map: vpn sa timing: remaining key lifetime (k/sec): (4607999/3526) IV size: 8 bytes replay detection support: Y outbound ah sas: outbound pcp sas: local ident (addr/mask/prot/port): (172.16.172.40/255.255.255.255/0/0) remote ident (addr/mask/prot/port): (10.1.1.11/255.255.255.255/0/0) current_peer: 171.69.89.129 PERMIT, flags={} #pkts encaps: 0, #pkts encrypt: 0, #pkts digest 0 #pkts decaps: 0, #pkts decrypt: 0, #pkts verify 0 #pkts compressed: 0, #pkts decompressed: 0 #pkts not compressed: 0, #pkts compr. failed: 0, #pkts decompress failed: 0, #send errors 0, #recv errors 0 local crypto endpt.: 172.16.172.40, remote crypto endpt.: 171.69.89.129 path mtu 1500, media mtu 1500 current outbound spi: 1E04D17C inbound esp sas: spi: 0x96D25C98(2530368664) transform: esp-des esp-md5-hmac , in use settings ={Tunnel, } slot: 0, conn id: 2000, flow_id: 1, crypto map: vpn sa timing: remaining key lifetime (k/sec): (4608000/3527) IV size: 8 bytes replay detection support: Y inbound ah sas: inbound pcp sas: outbound esp sas: spi: 0x1E04D17C(503632252) transform: esp-des esp-md5-hmac , in use settings ={Tunnel, } slot: 0, conn id: 2001, flow_id: 2, crypto map: vpn sa timing: remaining key lifetime (k/sec): (4608000/3527) IV size: 8 bytes replay detection support: Y outbound ah sas: outbound pcp sas:
- 3640#**show crypto engine connection active** ID Interface IP-Address State Algorithm Encrypt Decrypt 1 Ethernet0/1 172.16.172.40 set HMAC_SHA+DES_56_CB 0 0 2000 Ethernet0/1 172.16.172.40 set HMAC_MD5+DES_56_CB 0 0 2001 Ethernet0/1 172.16.172.40 set HMAC_MD5+DES_56_CB 0 0 2002 Ethernet0/1 172.16.172.40 set HMAC_MD5+DES_56_CB 0 20 2003 Ethernet0/1 172.16.172.40 set HMAC_MD5+DES_56_CB 4 0

Устранение неполадок

В этом разделе описывается процесс устранения неполадок конфигурации.

Ниже выходные данные отладки рабочего Ike согласование, собранного на Маршрутизаторе Cisco 3640. Следующие отладки были включены.

```
3640#show debug Cryptographic Subsystem: Crypto ISAKMP debugging is on Crypto Engine debugging is on Crypto IPSEC debugging is on Crypto PKI Trans debugging is on 3640# 00:02:30: ISAKMP (0:0): received packet from 171.69.89.129 (N) NEW SA 00:02:30: ISAKMP: local port 500, remote port 500 00:02:30: ISAKMP: Created a peer node for 171.69.89.129 00:02:30: ISAKMP (0:1): Setting client config settings 62D99D98 00:02:30: ISAKMP (0:1): (Re)Setting client xauth list ClientAuth and state 00:02:30: ISAKMP: Locking CONFIG struct 0x62D99D98 from crypto_ikmp_config_initialize_sa, count 1 00:02:30: ISAKMP (0:1): Input = IKE_MESG_FROM_PEER, IKE_MM_EXCH Old State = IKE_READY New State = IKE_R_MM1 00:02:30: ISAKMP (0:1): processing SA payload. message ID = 0 00:02:30: ISAKMP (0:1): processing vendor id payload 00:02:30: ISAKMP (0:1): vendor ID seems Unity/DPD but bad major 00:02:30: ISAKMP (0:1): vendor ID is XAUTH
```


does not match policy! 00:02:30: ISAKMP (0:1): atts are not acceptable. Next payload is 3
00:02:30: ISAKMP (0:1): Checking ISAKMP transform 14 against priority 1 policy 00:02:30: ISAKMP:
encryption DES-CBC 00:02:30: ISAKMP: hash MD5 00:02:30: ISAKMP: default group 5 00:02:30:
ISAKMP: auth XAUTHInitRSA 00:02:30: ISAKMP: life type in seconds 00:02:30: ISAKMP: life duration
(VPI) of 0x0 0x20 0xC4 0x9B 00:02:30: ISAKMP (0:1): Hash algorithm offered does not match
policy! 00:02:30: ISAKMP (0:1): atts are not acceptable. Next payload is 3 00:02:30: ISAKMP
(0:1): Checking ISAKMP transform 15 against priority 1 policy 00:02:30: ISAKMP: encryption DES-
CBC 00:02:30: ISAKMP: hash SHA 00:02:30: ISAKMP: default group 5 00:02:30: ISAKMP: auth RSA sig
00:02:30: ISAKMP: life type in seconds 00:02:30: ISAKMP: life duration (VPI) of 0x0 0x20 0xC4
0x9B 00:02:30: ISAKMP (0:1): Diffie-Hellman group offered does not match policy! 00:02:30:
ISAKMP (0:1): atts are not acceptable. Next payload is 3 00:02:30: ISAKMP (0:1): Checking ISAKMP
transform 16 against priority 1 policy 00:02:30: ISAKMP: encryption DES-CBC 00:02:30: ISAKMP:
hash MD5 00:02:30: ISAKMP: default group 5 00:02:30: ISAKMP: auth RSA sig 00:02:30: ISAKMP: life
type in seconds 00:02:30: ISAKMP: life duration (VPI) of 0x0 0x20 0xC4 0x9B 00:02:30: ISAKMP
(0:1): Hash algorithm offered does not match policy! 00:02:30: ISAKMP (0:1): atts are not
acceptable. Next payload is 3 00:02:30: ISAKMP (0:1): Checking ISAKMP transform 17 against
priority 1 policy 00:02:30: ISAKMP: encryption DES-CBC 00:02:30: ISAKMP: hash SHA 00:02:30:
ISAKMP: default group 2 00:02:30: ISAKMP: auth XAUTHInitRSA 00:02:30: ISAKMP: life type in
seconds 00:02:30: ISAKMP: life duration (VPI) of 0x0 0x20 0xC4 0x9B **00:02:30: ISAKMP (0:1): atts
are acceptable. Next payload is 3** 00:02:30: CryptoEngine0: generate alg parameter 00:02:31:
CRYPTO_ENGINE: Dh phase 1 status: 0 00:02:31: CRYPTO_ENGINE: Dh phase 1 status: 0 00:02:31:
ISAKMP (0:1): processing vendor id payload 00:02:31: ISAKMP (0:1): processing vendor id payload
00:02:31: ISAKMP (0:1): processing vendor id payload 00:02:31: ISAKMP (0:1): Input =
IKE_MSG_INTERNAL, IKE_PROCESS_MAIN_MODE Old State = IKE_R_MM1 New State = IKE_R_MM1 00:02:31:
ISAKMP (0:1): sending packet to 171.69.89.129 (R) MM_SA_SETUP 00:02:31: ISAKMP (0:1): Input =
IKE_MSG_INTERNAL, IKE_PROCESS_COMPLETE Old State = IKE_R_MM1 New State = IKE_R_MM2 00:02:31:
ISAKMP (0:1): received packet from 171.69.89.129 (R) MM_SA_SETUP 00:02:31: ISAKMP (0:1): Input =
IKE_MSG_FROM_PEER, IKE_MM_EXCH Old State = IKE_R_MM2 New State = IKE_R_MM3 00:02:31: ISAKMP
(0:1): processing KE payload. message ID = 0 00:02:31: CryptoEngine0: generate alg parameter
00:02:31: ISAKMP (0:1): processing NONCE payload. message ID = 0 00:02:31: CryptoEngine0:
calculate pkey hmac for conn id 1 00:02:31: CryptoEngine0: create ISAKMP SKEYID for conn id 1
00:02:31: ISAKMP (0:1): SKEYID state generated 00:02:31: ISAKMP (0:1): Input =
IKE_MSG_INTERNAL, IKE_PROCESS_MAIN_MODE Old State = IKE_R_MM3 New State = IKE_R_MM3 00:02:31:
ISAKMP (0:1): sending packet to 171.69.89.129 (R) MM_KEY_EXCH 00:02:31: ISAKMP (0:1): Input =
IKE_MSG_INTERNAL, IKE_PROCESS_COMPLETE Old State = IKE_R_MM3 New State = IKE_R_MM4 00:02:31:
ISAKMP (0:1): received packet from 171.69.89.129 (R) MM_KEY_EXCH 00:02:31: ISAKMP (0:1): Input =
IKE_MSG_FROM_PEER, IKE_MM_EXCH Old State = IKE_R_MM4 New State = IKE_R_MM5 00:02:31: ISAKMP
(0:1): processing ID payload. message ID = 0 00:02:31: **ISAKMP (0:1): processing CERT payload.**
message ID = 0 00:02:31: ISAKMP (0:1): processing a CT_X509_SIGNATURE cert 00:02:31: CRYPTO_PKI:
status = 0: poll CRL ldap search: server=171.69.89.126, base=CN = CRL1, OU = sjvnp, O = cisco, C
= us, attribute= : scope=2, filter=cn=CRL1 00:02:31: CRYPTO_PKI: ldap_bind() succeeded.
00:02:32: CRYPTO_PKI: set CRL update timer with delay: 89703 00:02:32: CRYPTO_PKI: the current
router time: 00:00:39 UTC Apr 9 2002 00:02:32: CRYPTO_PKI: the last CRL update time: 23:55:42
UTC Apr 8 2002 00:02:32: CRYPTO_PKI: the next CRL update time: 00:55:42 UTC Apr 10 2002
00:02:32: CRYPTO_PKI: status = 0: failed to get public key from the storage 00:02:32:
CRYPTO_PKI: status = 65535: failed to get issuer pubkey in cert 00:02:32: CRYPTO_PKI: status =
0: failed to get public key from the storage 00:02:32: CRYPTO_PKI: status = 65535: failed to get
issuer pubkey in cert 00:02:32: CRYPTO_PKI: status = 0: failed to get public key from the
storage 00:02:32: CRYPTO_PKI: status = 65535: failed to get issuer pubkey in cert 00:02:32:
CRYPTO_PKI: transaction GetCRL completed 00:02:32: CRYPTO_PKI: blocking callback received
status: 105 00:02:32: CRYPTO_PKI: Certificate verified, chain status= 1 00:02:32: ISAKMP (0:1):
OU = sjvnp 00:02:32: ISAKMP (0:1): processing CERT_REQ payload. message ID = 0 00:02:32: ISAKMP
(0:1): peer wants a CT_X509_SIGNATURE cert 00:02:32: ISAKMP (0:1): peer want cert issued by OU =
sjvnp, O = cisco, C = us 00:02:32: ISAKMP (0:1): processing SIG payload. message ID = 0
00:02:32: Crypto engine 0: RSA decrypt with public key 00:02:32: CryptoEngine0:
CRYPTO_RSA_PUB_DECRYPT 00:02:32: CryptoEngine0: generate hmac context for conn id 1 00:02:32:
ISAKMP (0:1): processing NOTIFY_INITIAL_CONTACT protocol 1 spi 0, message ID = 0, sa = 62D99794
00:02:32: ISAKMP (0:1): Process initial contact, bring down existing phase 1 and 2 SA's
00:02:32: ISAKMP (0:1): returning IP addr to the address pool 00:02:32: ISAKMP (0:1): peer does
not do paranoid keepalives. **00:02:32: ISAKMP (0:1): SA has been authenticated with 171.69.89.129**
00:02:32: ISAKMP (0:1): Input = IKE_MSG_INTERNAL, IKE_PROCESS_MAIN_MODE Old State = IKE_R_MM5
New State = IKE_R_MM5 00:02:32: IPSEC(key_engine): got a queue event... 00:02:32:
IPSEC(key_engine_delete_sas): rec'd delete notify from ISAKMP 00:02:32:
IPSEC(key_engine_delete_sas): delete all SAs shared with 171.69.89.129 00:02:32: ISAKMP (0:1):

SA is doing RSA signature authentication plus XAUTH using id type ID_FQDN 00:02:32: ISAKMP (1):
ID payload next-payload : 6 type : 2 protocol : 17 port : 500 length : 18 00:02:32: ISAKMP (1):
Total payload length: 22 00:02:32: CryptoEngine0: generate hmac context for conn id 1 00:02:32:
Crypto engine 0: RSA encrypt with private key 00:02:32: CryptoEngine0: CRYPTO_RSA_PRIV_ENCRYPT
00:02:32: CryptoEngine0: clear dh number for conn id 1 00:02:32: ISAKMP (0:1): sending packet to
171.69.89.129 (R) CONF_XAUTH 00:02:32: CryptoEngine0: generate hmac context for conn id 1
00:02:32: ISAKMP (0:1): sending packet to 171.69.89.129 (R) CONF_XAUTH 00:02:32: ISAKMP: Sending
phase 1 responder lifetime 86400 00:02:32: ISAKMP (0:1): Input = IKE_MSG_INTERNAL,
IKE_PROCESS_COMPLETE Old State = IKE_R_MM5 New State = IKE_P1_COMPLETE **00:02:32: ISAKMP (0:1):
Need XAUTH** 00:02:32: ISAKMP (0:1): Input = IKE_MSG_INTERNAL, IKE_PHASE1_COMPLETE Old State =
IKE_P1_COMPLETE New State = IKE_XAUTH_AAA_START_LOGIN_AWAIT 00:02:32: ISAKMP: got callback 1
00:02:32: ISAKMP/xauth: request attribute XAUTH_TYPE_V2 00:02:32: ISAKMP/xauth: request
attribute XAUTH_MESSAGE_V2 00:02:32: ISAKMP/xauth: request attribute XAUTH_USER_NAME_V2
00:02:32: ISAKMP/xauth: request attribute XAUTH_USER_PASSWORD_V2 00:02:32: CryptoEngine0:
generate hmac context for conn id 1 00:02:32: ISAKMP (0:1): initiating peer config to
171.69.89.129. ID = -670289125 00:02:32: ISAKMP (0:1): sending packet to 171.69.89.129 (R)
CONF_XAUTH 00:02:32: ISAKMP (0:1): Input = IKE_MSG_FROM_AAA, IKE_AAA_START_LOGIN Old State =
IKE_XAUTH_AAA_START_LOGIN_AWAIT New State = IKE_XAUTH_REQ_SENT 00:02:36: ISAKMP (0:1): received
packet from 171.69.89.129 (R) CONF_XAUTH 00:02:36: ISAKMP (0:1): processing transaction payload
from 171.69.89.129. message ID = -670289125 00:02:36: CryptoEngine0: generate hmac context for
conn id 1 00:02:36: ISAKMP: Config payload REPLY 00:02:36: ISAKMP/xauth: reply attribute
XAUTH_TYPE_V2 unexpected 00:02:36: ISAKMP/xauth: reply attribute XAUTH_USER_NAME_V2 00:02:36:
ISAKMP/xauth: reply attribute XAUTH_USER_PASSWORD_V2 00:02:36: ISAKMP (0:1): deleting node -
670289125 error FALSE reason "done with xauth request/reply exchange" 00:02:36: ISAKMP (0:1):
Input = IKE_MSG_FROM_PEER, IKE_CFG_REPLY Old State = IKE_XAUTH_REQ_SENT New State =
IKE_XAUTH_AAA_CONT_LOGIN_AWAIT 00:02:36: ISAKMP: got callback 1 00:02:36: CryptoEngine0:
generate hmac context for conn id 1 00:02:36: ISAKMP (0:1): initiating peer config to
171.69.89.129. ID = -1610220250 00:02:36: ISAKMP (0:1): sending packet to 171.69.89.129 (R)
CONF_XAUTH 00:02:36: ISAKMP (0:1): Input = IKE_MSG_FROM_AAA, IKE_AAA_CONT_LOGIN Old State =
IKE_XAUTH_AAA_CONT_LOGIN_AWAIT New State = IKE_XAUTH_SET_SENT 00:02:36: ISAKMP (0:1): received
packet from 171.69.89.129 (R) CONF_XAUTH 00:02:36: ISAKMP (0:1): processing transaction payload
from 171.69.89.129. message ID = -1610220250 00:02:36: CryptoEngine0: generate hmac context for
conn id 1 00:02:36: ISAKMP: Config payload ACK **00:02:36: ISAKMP (0:1): XAUTH ACK Processed**
00:02:36: ISAKMP (0:1): deleting node -1610220250 error FALSE reason "done with transaction"
**00:02:36: ISAKMP (0:1): Input = IKE_MSG_FROM_PEER, IKE_CFG_ACK Old State = IKE_XAUTH_SET_SENT
New State = IKE_P1_COMPLETE** 00:02:36: ISAKMP (0:1): Input = IKE_MSG_INTERNAL,
IKE_PHASE1_COMPLETE Old State = IKE_P1_COMPLETE New State = IKE_P1_COMPLETE 00:02:36: ISAKMP
(0:1): received packet from 171.69.89.129 (R) QM_IDLE 00:02:36: ISAKMP (0:1): processing
transaction payload from 171.69.89.129. message ID = 1789347264 00:02:36: CryptoEngine0:
generate hmac context for conn id 1 **00:02:36: ISAKMP: Config payload REQUEST** 00:02:36: ISAKMP
(0:1): checking request: 00:02:36: ISAKMP: IP4_ADDRESS 00:02:36: ISAKMP: IP4_NETMASK 00:02:36:
ISAKMP: IP4_DNS 00:02:36: ISAKMP: IP4_NBNS 00:02:36: ISAKMP: ADDRESS_EXPIRY 00:02:36: ISAKMP:
APPLICATION_VERSION 00:02:36: ISAKMP: UNKNOWN Unknown Attr: 0x7000 00:02:36: ISAKMP: UNKNOWN
Unknown Attr: 0x7001 00:02:36: ISAKMP: DEFAULT_DOMAIN 00:02:36: ISAKMP: SPLIT_INCLUDE 00:02:36:
ISAKMP: UNKNOWN Unknown Attr: 0x7007 00:02:36: ISAKMP: UNKNOWN Unknown Attr: 0x7008 00:02:36:
ISAKMP (0:1): Input = IKE_MSG_FROM_PEER, IKE_CFG_REQUEST Old State = IKE_P1_COMPLETE New State
= IKE_CONFIG_AUTHOR_AAA_AWAIT 00:02:36: ISAKMP: got callback 1 00:02:36: ISAKMP (0:1):
attributes sent in message: 00:02:36: Address: 0.2.0.0 00:02:36: ISAKMP (0:1): allocating
address 10.1.1.10 00:02:36: ISAKMP: Sending private address: 10.1.1.10 00:02:36: ISAKMP: Unknown
Attr: IP4_NETMASK (0x2) 00:02:36: ISAKMP: Sending IP4_DNS server address: 10.1.1.5 00:02:36:
ISAKMP: Sending IP4_NBNS server address: 10.1.1.5 00:02:36: ISAKMP: Sending ADDRESS_EXPIRY
seconds left to use the address: 86394 00:02:36: ISAKMP: Sending APPLICATION_VERSION string:
Cisco Internetwork Operating System Software IOS (tm) 3600 Software (C3640-IK803S-M), Version
12.2(8)T, RELEASE SOFTWARE (fc2) TAC Support: <http://www.cisco.com/tac> Copyright (c) 1986-2002
by cisco Systems, Inc. Compiled Thu 14-Feb-02 19:36 by ccai 00:02:36: ISAKMP: Unknown Attr:
UNKNOWN (0x7000) 00:02:36: ISAKMP: Unknown Attr: UNKNOWN (0x7001) 00:02:36: ISAKMP: Sending
DEFAULT_DOMAIN default domain name: sjpki.com 00:02:36: ISAKMP: Sending split include name 101
network 10.1.0.0 mask 255.255.0.0, protocol 0, src port 0, dst port 0 00:02:36: ISAKMP: Unknown
Attr: UNKNOWN (0x7007) 00:02:36: ISAKMP: Unknown Attr: UNKNOWN (0x7008) 00:02:36: CryptoEngine0:
generate hmac context for conn id 1 00:02:36: ISAKMP (0:1): responding to peer config from
171.69.89.129. ID = 1789347264 **00:02:36: ISAKMP (0:1): sending packet to 171.69.89.129 (R)**
CONF_ADDR 00:02:36: ISAKMP (0:1): deleting node 1789347264 error FALSE reason "" 00:02:36:
ISAKMP (0:1): Input = IKE_MSG_FROM_AAA, IKE_AAA_GROUP_ATTR Old State =
IKE_CONFIG_AUTHOR_AAA_AWAIT New State = IKE_P1_COMPLETE 00:02:36: ISAKMP (0:1): received packet

from 171.69.89.129 (R) QM_IDLE 00:02:36: CryptoEngine0: generate hmac context for conn id 1
00:02:36: ISAKMP (0:1): processing HASH payload. message ID = -1460041169 00:02:36: ISAKMP
(0:1): processing SA payload. message ID = -1460041169 **00:02:36: ISAKMP (0:1): Checking IPsec
proposal 1** 00:02:36: ISAKMP: transform 1, ESP_3DES 00:02:36: ISAKMP: attributes in transform:
00:02:36: ISAKMP: authenticator is HMAC-MD5 00:02:36: ISAKMP: encaps is 1 00:02:36: ISAKMP: SA
life type in seconds 00:02:36: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B 00:02:36:
validate proposal 0 00:02:36: IPSEC(validate_proposal): transform proposal (prot 3, trans 3,
hmac_alg 1) not supported 00:02:36: ISAKMP (0:1): atts not acceptable. Next payload is 0
00:02:36: ISAKMP (0:1): skipping next ANded proposal (1) 00:02:36: ISAKMP (0:1): Checking IPsec
proposal 2 00:02:36: ISAKMP: transform 1, ESP_3DES 00:02:36: ISAKMP: attributes in transform:
00:02:36: ISAKMP: authenticator is HMAC-SHA 00:02:36: ISAKMP: encaps is 1 00:02:36: ISAKMP: SA
life type in seconds 00:02:36: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B 00:02:36:
validate proposal 0 00:02:36: IPSEC(validate_proposal): transform proposal (prot 3, trans 3,
hmac_alg 2) not supported 00:02:36: ISAKMP (0:1): atts not acceptable. Next payload is 0
00:02:36: ISAKMP (0:1): skipping next ANded proposal (2) 00:02:36: ISAKMP (0:1): Checking IPsec
proposal 3 00:02:36: ISAKMP: transform 1, ESP_3DES 00:02:36: ISAKMP: attributes in transform:
00:02:36: ISAKMP: authenticator is HMAC-MD5 00:02:36: ISAKMP: encaps is 1 00:02:36: ISAKMP: SA
life type in seconds 00:02:36: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B 00:02:36:
validate proposal 0 00:02:36: IPSEC(validate_proposal): transform proposal (prot 3, trans 3,
hmac_alg 1) not supported 00:02:36: ISAKMP (0:1): atts not acceptable. Next payload is 0
00:02:36: ISAKMP (0:1): Checking IPsec proposal 4 00:02:36: ISAKMP: transform 1, ESP_3DES
00:02:36: ISAKMP: attributes in transform: 00:02:36: ISAKMP: authenticator is HMAC-SHA 00:02:36:
ISAKMP: encaps is 1 00:02:36: ISAKMP: SA life type in seconds 00:02:36: ISAKMP: SA life duration
(VPI) of 0x0 0x20 0xC4 0x9B 00:02:36: validate proposal 0 00:02:36: IPSEC(validate_proposal):
transform proposal (prot 3, trans 3, hmac_alg 2) not supported 00:02:36: ISAKMP (0:1): atts not
acceptable. Next payload is 0 00:02:36: ISAKMP (0:1): Checking IPsec proposal 5 00:02:36:
ISAKMP: transform 1, ESP_DES 00:02:36: ISAKMP: attributes in transform: 00:02:36: ISAKMP:
authenticator is HMAC-MD5 00:02:36: ISAKMP: encaps is 1 00:02:36: ISAKMP: SA life type in
seconds 00:02:36: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B 00:02:36: validate
proposal 0 00:02:36: ISAKMP (0:1): atts are acceptable. 00:02:36: ISAKMP (0:1): Checking IPsec
proposal 5 00:02:36: ISAKMP (0:1): transform 1, IPPCP LZS 00:02:36: ISAKMP: attributes in
transform: 00:02:36: ISAKMP: encaps is 1 00:02:36: ISAKMP: SA life type in seconds 00:02:36:
ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B 00:02:36: IPSEC(validate_proposal):
transform proposal (prot 4, trans 3, hmac_alg 0) not supported 00:02:36: ISAKMP (0:1): atts not
acceptable. Next payload is 0 00:02:36: ISAKMP (0:1): Checking IPsec proposal 6 00:02:36:
ISAKMP: transform 1, ESP_DES 00:02:36: ISAKMP: attributes in transform: 00:02:36: ISAKMP:
authenticator is HMAC-SHA 00:02:36: ISAKMP: encaps is 1 00:02:36: ISAKMP: SA life type in
seconds 00:02:36: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B 00:02:36: validate
proposal 0 00:02:36: IPSEC(validate_proposal): transform proposal (prot 3, trans 2, hmac_alg 2)
not supported 00:02:36: ISAKMP (0:1): atts not acceptable. Next payload is 0 00:02:36: ISAKMP
(0:1): skipping next ANded proposal (6) 00:02:36: ISAKMP (0:1): Checking IPsec proposal 7
00:02:36: ISAKMP: transform 1, ESP_DES 00:02:36: ISAKMP: attributes in transform: 00:02:36:
ISAKMP: authenticator is HMAC-MD5 00:02:36: ISAKMP: encaps is 1 00:02:36: ISAKMP: SA life type
in seconds 00:02:36: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B 00:02:36: validate
proposal 0 **00:02:36: ISAKMP (0:1): atts are acceptable.** 00:02:36:
IPSEC(validate_proposal_request): proposal part #1, (key eng. msg.) INBOUND local=
172.16.172.40, remote= 171.69.89.129, local_proxy= 172.16.172.40/255.255.255.255/0/0 (type=1),
remote_proxy= 10.1.1.10/255.255.255.255/0/0 (type=1), protocol= ESP, transform= esp-des esp-md5-
hmac , lifedur= 0s and 0kb, spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x4 00:02:36: validate
proposal request 0 00:02:36: ISAKMP (0:1): processing NONCE payload. message ID = -1460041169
00:02:36: ISAKMP (0:1): processing ID payload. message ID = -1460041169 00:02:36: ISAKMP (0:1):
processing ID payload. message ID = -1460041169 00:02:36: ISAKMP (0:1): asking for 1 spis from
ipsec 00:02:36: ISAKMP (0:1): Node -1460041169, Input = IKE_MSG_FROM_PEER, IKE_QM_EXCH Old
State = IKE_QM_READY New State = IKE_QM_SPI_STARVE 00:02:36: IPSEC(key_engine): got a queue
event... 00:02:36: IPSEC(spi_response): getting spi 1289658319 for SA from 172.16.172.40 to
171.69.89.129 for prot 3 00:02:36: ISAKMP: received ke message (2/1) 00:02:36: CryptoEngine0:
generate hmac context for conn id 1 00:02:36: ISAKMP (0:1): sending packet to 171.69.89.129 (R)
QM_IDLE 00:02:36: ISAKMP (0:1): Node -1460041169, Input = IKE_MSG_FROM_IPSEC, IKE_SPI_REPLY Old
State = IKE_QM_SPI_STARVE New State = IKE_QM_R_QM2 00:02:36: ISAKMP (0:1): received packet from
171.69.89.129 (R) QM_IDLE 00:02:36: CryptoEngine0: generate hmac context for conn id 1 00:02:36:
ipsec allocate flow 0 00:02:36: ipsec allocate flow 0 00:02:36: ISAKMP (0:1): Creating IPsec SAs
00:02:36: inbound SA from 171.69.89.129 to 172.16.172.40 (proxy 10.1.1.10 to 172.16.172.40)
00:02:36: has spi 0x4CDE9FCF and conn_id 2000 and flags 4 00:02:36: lifetime of 2147483 seconds
00:02:36: outbound SA from 172.16.172.40 to 171.69.89.129 (proxy 172.16.172.40 to 10.1.1.10)

00:02:36: has spi -154514029 and conn_id 2001 and flags C 00:02:36: lifetime of 2147483 seconds
00:02:36: ISAKMP (0:1): deleting node -1460041169 error FALSE reason "quick mode done (await())"
00:02:36: ISAKMP (0:1): Node -1460041169, Input = IKE_MSG_FROM_PEER, IKE_QM_EXCH Old State =
IKE_QM_R_QM2 New State = IKE_QM_PHASE2_COMPLETE 00:02:36: IPSEC(key_engine): got a queue
event... 00:02:36: IPSEC(initialize_sas): , (key eng. msg.) INBOUND local= 172.16.172.40,
remote= 171.69.89.129, local_proxy= 172.16.172.40/0.0.0.0/0/0 (type=1), remote_proxy=
10.1.1.10/0.0.0.0/0/0 (type=1), protocol= ESP, transform= esp-des esp-md5-hmac , lifedur=
2147483s and 0kb, spi= 0x4CDE9FCF(1289658319), conn_id= 2000, keysize= 0, flags= 0x4 00:02:36:
IPSEC(initialize_sas): , (key eng. msg.) OUTBOUND local= 172.16.172.40, remote= 171.69.89.129,
local_proxy= 172.16.172.40/0.0.0.0/0/0 (type=1), remote_proxy= 10.1.1.10/0.0.0.0/0/0 (type=1),
protocol= ESP, transform= esp-des esp-md5-hmac , lifedur= 2147483s and 0kb, spi=
0xF6CA4D93(4140453267), conn_id= 2001, keysize= 0, flags= 0xC 00:02:36: IPSEC(create_sa): sa
created, (sa) sa_dest= 172.16.172.40, sa_prot= 50, sa_spi= 0x4CDE9FCF(1289658319), sa_trans=
esp-des esp-md5-hmac , sa_conn_id= 2000 00:02:36: IPSEC(create_sa): sa created, (sa) sa_dest=
171.69.89.129, sa_prot= 50, sa_spi= 0xF6CA4D93(4140453267), sa_trans= esp-des esp-md5-hmac ,
sa_conn_id= 2001 00:02:36: ISAKMP: received ke message (4/1) 00:02:36: ISAKMP: Locking CONFIG
struct 0x62D99D98 for crypto_ikmp_config_handle_kei_mess, count 2 00:02:37: ISAKMP (0:1):
received packet from 171.69.89.129 (R) QM_IDLE 00:02:37: CryptoEngine0: generate hmac context
for conn id 1 00:02:37: ISAKMP (0:1): processing HASH payload. message ID = 926518983 00:02:37:
ISAKMP (0:1): processing SA payload. message ID = 926518983 00:02:37: ISAKMP (0:1): Checking
IPSec proposal 1 00:02:37: ISAKMP: transform 1, ESP_3DES 00:02:37: ISAKMP: attributes in
transform: 00:02:37: ISAKMP: authenticator is HMAC-MD5 00:02:37: ISAKMP: encaps is 1 00:02:37:
ISAKMP: SA life type in seconds 00:02:37: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B
00:02:37: validate proposal 0 00:02:37: IPSEC(validate_proposal): transform proposal (prot 3,
trans 3, hmac_alg 1) not supported 00:02:37: ISAKMP (0:1): atts not acceptable. Next payload is
0 00:02:37: ISAKMP (0:1): skipping next ANded proposal (1) 00:02:37: ISAKMP (0:1): Checking
IPSec proposal 2 00:02:37: ISAKMP: transform 1, ESP_3DES 00:02:37: ISAKMP: attributes in
transform: 00:02:37: ISAKMP: authenticator is HMAC-SHA 00:02:37: ISAKMP: encaps is 1 00:02:37:
ISAKMP: SA life type in seconds 00:02:37: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B
00:02:37: validate proposal 0 00:02:37: IPSEC(validate_proposal): transform proposal (prot 3,
trans 3, hmac_alg 2) not supported 00:02:37: ISAKMP (0:1): atts not acceptable. Next payload is
0 00:02:37: ISAKMP (0:1): skipping next ANded proposal (2) 00:02:37: ISAKMP (0:1): Checking
IPSec proposal 3 00:02:37: ISAKMP: transform 1, ESP_3DES 00:02:37: ISAKMP: attributes in
transform: 00:02:37: ISAKMP: authenticator is HMAC-MD5 00:02:37: ISAKMP: encaps is 1 00:02:37:
ISAKMP: SA life type in seconds 00:02:37: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B
00:02:37: validate proposal 0 00:02:37: IPSEC(validate_proposal): transform proposal (prot 3,
trans 3, hmac_alg 1) not supported 00:02:37: ISAKMP (0:1): atts not acceptable. Next payload is
0 00:02:37: ISAKMP (0:1): Checking IPSec proposal 4 00:02:37: ISAKMP: transform 1, ESP_3DES
00:02:37: ISAKMP: attributes in transform: 00:02:37: ISAKMP: authenticator is HMAC-SHA 00:02:37:
ISAKMP: encaps is 1 00:02:37: ISAKMP: SA life type in seconds 00:02:37: ISAKMP: SA life duration
(VPI) of 0x0 0x20 0xC4 0x9B 00:02:37: validate proposal 0 00:02:37: IPSEC(validate_proposal):
transform proposal (prot 3, trans 3, hmac_alg 2) not supported 00:02:37: ISAKMP (0:1): atts not
acceptable. Next payload is 0 00:02:37: ISAKMP (0:1): Checking IPSec proposal 5 00:02:37:
ISAKMP: transform 1, ESP_DES 00:02:37: ISAKMP: attributes in transform: 00:02:37: ISAKMP:
authenticator is HMAC-MD5 00:02:37: ISAKMP: encaps is 1 00:02:37: ISAKMP: SA life type in
seconds 00:02:37: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B 00:02:37: validate
proposal 0 00:02:37: ISAKMP (0:1): atts are acceptable. 00:02:37: ISAKMP (0:1): Checking IPSec
proposal 5 00:02:37: ISAKMP (0:1): transform 1, IPPCP LZS 00:02:37: ISAKMP: attributes in
transform: 00:02:37: ISAKMP: encaps is 1 00:02:37: ISAKMP: SA life type in seconds 00:02:37:
ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B 00:02:37: IPSEC(validate_proposal):
transform proposal (prot 4, trans 3, hmac_alg 0) not supported 00:02:37: ISAKMP (0:1): atts not
acceptable. Next payload is 0 00:02:37: ISAKMP (0:1): Checking IPSec proposal 6 00:02:37:
ISAKMP: transform 1, ESP_DES 00:02:37: ISAKMP: attributes in transform: 00:02:37: ISAKMP:
authenticator is HMAC-SHA 00:02:37: ISAKMP: encaps is 1 00:02:37: ISAKMP: SA life type in
seconds 00:02:37: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B 00:02:37: validate
proposal 0 00:02:37: IPSEC(validate_proposal): transform proposal (prot 3, trans 2, hmac_alg 2)
not supported 00:02:37: ISAKMP (0:1): atts not acceptable. Next payload is 0 00:02:37: ISAKMP
(0:1): skipping next ANded proposal (6) 00:02:37: ISAKMP (0:1): Checking IPSec proposal 7
00:02:37: ISAKMP: transform 1, ESP_DES 00:02:37: ISAKMP: attributes in transform: 00:02:37:
ISAKMP: authenticator is HMAC-MD5 00:02:37: ISAKMP: encaps is 1 00:02:37: ISAKMP: SA life type
in seconds 00:02:37: ISAKMP: SA life duration (VPI) of 0x0 0x20 0xC4 0x9B 00:02:37: validate
proposal 0 00:02:37: ISAKMP (0:1): atts are acceptable. 00:02:37:
IPSEC(validate_proposal_request): proposal part #1, (key eng. msg.) INBOUND local=
172.16.172.40, remote= 171.69.89.129, local_proxy= 10.1.0.0/255.255.0.0/0/0 (type=4),


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remote_proxy= 10.1.1.10/255.255.255.255/0/0 (type=1), protocol= ESP, transform= esp-des esp-md5-
hmac , lifedur= 0s and 0kb, spi= 0x0(0), conn_id= 0, keysize= 0, flags= 0x4 00:02:37: validate
proposal request 0 00:02:37: ISAKMP (0:1): processing NONCE payload. message ID = 926518983
00:02:37: ISAKMP (0:1): processing ID payload. message ID = 926518983 00:02:37: ISAKMP (0:1):
processing ID payload. message ID = 926518983 00:02:37: ISAKMP (0:1): asking for 1 spis from
ipsec 00:02:37: ISAKMP (0:1): Node 926518983, Input = IKE_MSG_FROM_PEER, IKE_QM_EXCH Old State
= IKE_QM_READY New State = IKE_QM_SPI_STARVE 00:02:37: IPSEC(key_engine): got a queue event...
00:02:37: IPSEC(spi_response): getting spi 1746304572 for SA from 172.16.172.40 to 171.69.89.129
for prot 3 00:02:37: ISAKMP: received ke message (2/1) 00:02:37: CryptoEngine0: generate hmac
context for conn id 1 00:02:37: ISAKMP (0:1): sending packet to 171.69.89.129 (R) QM_IDLE
00:02:37: ISAKMP (0:1): Node 926518983, Input = IKE_MSG_FROM_IPSEC, IKE_SPI_REPLY Old State =
IKE_QM_SPI_STARVE New State = IKE_QM_R_QM2 00:02:37: ISAKMP (0:1): received packet from
171.69.89.129 (R) QM_IDLE 00:02:37: CryptoEngine0: generate hmac context for conn id 1 00:02:37:
ipsec allocate flow 0 00:02:37: ipsec allocate flow 0 00:02:37: ISAKMP (0:1): Creating IPsec SAs
00:02:37: inbound SA from 171.69.89.129 to 172.16.172.40 (proxy 10.1.1.10 to 10.1.0.0) 00:02:37:
has spi 0x68167E3C and conn_id 2002 and flags 4 00:02:37: lifetime of 2147483 seconds 00:02:37:
outbound SA from 172.16.172.40 to 171.69.89.129 (proxy 10.1.0.0 to 10.1.1.10) 00:02:37: has spi
-697634356 and conn_id 2003 and flags C 00:02:37: lifetime of 2147483 seconds 00:02:37: ISAKMP
(0:1): deleting node 926518983 error FALSE reason "quick mode done (await())" 00:02:37: ISAKMP
(0:1): Node 926518983, Input = IKE_MSG_FROM_PEER, IKE_QM_EXCH Old State = IKE_QM_R_QM2 New
State = IKE_QM_PHASE2_COMPLETE 00:02:37: IPSEC(key_engine): got a queue event... 00:02:37:
IPSEC(initialize_sas): , (key eng. msg.) INBOUND local= 172.16.172.40, remote= 171.69.89.129,
local_proxy= 10.1.0.0/255.255.0.0/0/0 (type=4), remote_proxy= 10.1.1.10/0.0.0.0/0/0 (type=1),
protocol= ESP, transform= esp-des esp-md5-hmac , lifedur= 2147483s and 0kb, spi=
0x68167E3C(1746304572), conn_id= 2002, keysize= 0, flags= 0x4 00:02:37: IPSEC(initialize_sas): ,
(key eng. msg.) OUTBOUND local= 172.16.172.40, remote= 171.69.89.129, local_proxy=
10.1.0.0/255.255.0.0/0/0 (type=4), remote_proxy= 10.1.1.10/0.0.0.0/0/0 (type=1), protocol= ESP,
transform= esp-des esp-md5-hmac , lifedur= 2147483s and 0kb, spi= 0xD66AF1CC(3597332940),
conn_id= 2003, keysize= 0, flags= 0xC 00:02:37: IPSEC(create_sa): sa created, (sa) sa_dest=
172.16.172.40, sa_prot= 50, sa_spi= 0x68167E3C(1746304572), sa_trans= esp-des esp-md5-hmac ,
sa_conn_id= 2002 00:02:37: IPSEC(create_sa): sa created, (sa) sa_dest= 171.69.89.129, sa_prot=
50, sa_spi= 0xD66AF1CC(3597332940), sa_trans= esp-des esp-md5-hmac , sa_conn_id= 2003
```

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