



**Cisco**

## **Exam Questions 300-730**

Implementing Secure Solutions with Virtual Private Networks (SVPN)

### NEW QUESTION 1

DRAG DROP

Drag and drop the correct commands from the right onto the blanks within the code on the left to implement a design that allow for dynamic spoke-to-spoke communication. Not all commands are used.

Select and Place:

### Answer Area

**Router A**

```

interface Tunnell
  ip address 10.0.0.1 255.255.255.0
  ip nhrp mp multicast dynamic
  ip nhrp network-id 1
  ip nhrp 
  no ip split-horizon eigrp 10
  tunnel source GigabitEthernet1
  tunnel mode gre multipoint

interface GigabitEthernet1
  ip address 1.1.1.1 255.255.255.0

router eigrp 10
  network 10.0.0.0 0.0.0.255

```

**Router B**

```

interface Tunnell
  ip address 10.0.0.2 255.255.255.0
  ip nhrp nhs  nbma  multicast
  ip nhrp network-id 1
  ip nhrp 
  tunnel source GigabitEthernet1
  tunnel mode gre multipoint

interface GigabitEthernet1
  ip address 2.2.2.2 255.255.255.0

router eigrp 10
  network 10.0.0.0 0.0.0.255

```

1.1.1.1

10.0.0.1

redirect

shortcut

server-only

- A. Mastered
- B. Not Mastered

Answer: A

#### Explanation:

Reference: [https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/sec\\_conn\\_dmvpn/configuration/xr-16/sec-conn-dmvpn-xr-16-book/sec-conn-dmvpn-summaps.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/sec_conn_dmvpn/configuration/xr-16/sec-conn-dmvpn-xr-16-book/sec-conn-dmvpn-summaps.html)

### NEW QUESTION 2

A second set of traffic selectors is negotiated between two peers using IKEv2. Which IKEv2 packet will contain details of the exchange?

- A. IKEv2 IKE\_SA\_INIT
- B. IKEv2 INFORMATIONAL
- C. IKEv2 CREATE\_CHILD\_SA
- D. IKEv2 IKE\_AUTH

Answer: B

### NEW QUESTION 3

On a FlexVPN hub-and-spoke topology where spoke-to-spoke tunnels are not allowed, which command is needed for the hub to be able to terminate FlexVPN tunnels?

- A. interface virtual-access
- B. ip nhrp redirect
- C. interface tunnel
- D. interface virtual-template

**Answer:** D

#### NEW QUESTION 4

Which two parameters help to map a VPN session to a tunnel group without using the tunnel-group list? (Choose two.)

- A. group-alias
- B. certificate map
- C. optimal gateway selection
- D. group-url
- E. AnyConnect client version

**Answer:** BD

#### NEW QUESTION 5

Which configuration construct must be used in a FlexVPN tunnel?

- A. EAP configuration
- B. multipoint GRE tunnel interface
- C. IKEv1 policy
- D. IKEv2 profile

**Answer:** D

#### NEW QUESTION 6

A Cisco AnyConnect client establishes a SSL VPN connection with an ASA at the corporate office. An engineer must ensure that the client computer meets the enterprise security policy. Which feature can update the client to meet an enterprise security policy?

- A. Endpoint Assessment
- B. Cisco Secure Desktop
- C. Basic Host Scan
- D. Advanced Endpoint Assessment

**Answer:** D

#### NEW QUESTION 7

Which requirement is needed to use local authentication for Cisco AnyConnect Secure Mobility Clients that connect to a FlexVPN server?

- A. use of certificates instead of username and password
- B. EAP-AnyConnect
- C. EAP query-identity
- D. AnyConnect profile

**Answer:** D

#### Explanation:

Reference: <https://www.cisco.com/c/en/us/support/docs/security/flexvpn/200555-FlexVPN-AnyConnect-IKEv2-Remote-Access.html>

#### NEW QUESTION 8

Refer to the exhibit.

```
group-policy DfltGrpPolicy internal
group-policy DfltGrpPolicy attributes
  banner none
  dns-server value 10.10.10.10
  vpn-tunnel-protocol ssl-clientless
  default-domain value cisco.com
  address-pools value ACPool

group-policy Admin_Group internal
group-policy Admin_Group attributes
  vpn-simultaneous-logins 10
  vpn-tunnel-protocol ikev2 ssl-clientless
  split-tunnel-policy tunnelall

tunnel-group Admins type remote-access
tunnel-group Admins general-attributes
  default-group-policy Admin_Group
tunnel-group Admins webvpn-attributes
  group-alias Admins enable

tunnel-group Employee type remote-access
tunnel-group Employee webvpn-attributes
  group-alias Employee enable

webvpn
  enable outside
  anyconnect image disk0:/anyconnect-win-4.7.01076-webdeploy-k9.pkg 1
  anyconnect enable
  tunnel-group-list enable
```

Which VPN technology is allowed for users connecting to the Employee tunnel group?

- A. SSL AnyConnect
- B. IKEv2 AnyConnect
- C. crypto map
- D. clientless

**Answer:** B

#### NEW QUESTION 9

Which command is used to troubleshoot an IPv6 FlexVPN spoke-to-hub connectivity failure?

- A. show crypto ikev2 sa
- B. show crypto isakmp sa
- C. show crypto gkm
- D. show crypto identity

**Answer:** A

#### Explanation:

Reference: <https://www.cisco.com/c/en/us/support/docs/security/flexvpn/116413-configure-flexvpn-00.pdf>

#### NEW QUESTION 10

Refer to the exhibit.



```
ISAKMP: (0):beginning Main Mode exchange
ISAKMP-PAK: (0):sending packet to 192.168.0.8 my_port 500 peer_port 500 (I) MM_NO_STATE
ISAKMP-PAK: (0):received packet from 192.168.0.8 dport 500 sport 500 Global (I) MM_NO_STATE
ISAKMP: (0):Old State = IKE_I_MM1 New State = IKE_I_MM2
ISAKMP: (0):found peer pre-shared key matching 192.168.0.8
ISAKMP: (0):local preshared key found
ISAKMP: (0):Checking ISAKMP transform 1 against priority 10 policy
ISAKMP: (0):      encryption AES-CBC
ISAKMP: (0):      keylength of 256
ISAKMP: (0):      hash SHA256
ISAKMP: (0):      default group 14
ISAKMP: (0):      auth pre-share
ISAKMP: (0):      life type in seconds
ISAKMP: (0):      life duration (basic) of 1200
ISAKMP: (0):atts are acceptable. Next payload is 0
ISAKMP-PAK: (0):sending packet to 192.168.0.8 my_port 500 peer_port 500 (I) MM_SA_SETUP
ISAKMP: (0):Old State = IKE_I_MM2 New State = IKE_I_MM3
ISAKMP-PAK: (0):received packet from 192.168.0.8 dport 500 sport 500 Global (I) MM_SA_SETUP
ISAKMP: (0):Old State = IKE_I_MM3 New State = IKE_I_MM4
ISAKMP: (0):found peer pre-shared key matching 192.168.0.8
ISAKMP: (1005):Old State = IKE_I_MM4 New State = IKE_I_MM4
ISAKMP: (1005):pre-shared key authentication using id type ID_IPV4_ADDR
ISAKMP-PAK: (1005):sending packet to 192.168.0.8 my_port 4500 peer_port 4500 (I) MM_KEY_EXCH
ISAKMP: (1005):Old State = IKE_I_MM4 New State = IKE_I_MM5
ISAKMP-PAK: (1005):received packet from 192.168.0.8 dport 500 sport 500 Global (I) MM_KEY_EXCH
ISAKMP: (1005):phase 1 packet is a duplicate of a previous packet.
ISAKMP: (1005):retransmitting due to retransmit phase 1
ISAKMP: (1005):retransmitting phase 1 MM_KEY_EXCH...
ISAKMP: (1005):: incrementing error counter on sa, attempt 1 of 5: retransmit phase 1
ISAKMP-PAK: (1005):sending packet to 192.168.0.8 my_port 4500 peer_port 4500 (I) MM_KEY_EXCH
ISAKMP-PAK: (1005):received packet from 192.168.0.8 dport 500 sport 500 Global (I) MM_KEY_EXCH
ISAKMP: (1005):phase 1 packet is a duplicate of a previous packet.
ISAKMP: (1005):retransmitting due to retransmit phase 1
```

A site-to-site tunnel between two sites is not coming up. Based on the debugs, what is the cause of this issue?

- A. An authentication failure occurs on the remote peer.
- B. A certificate fragmentation issue occurs between both sides.
- C. UDP 4500 traffic from the peer does not reach the router.
- D. An authentication failure occurs on the router.

Answer: C

#### NEW QUESTION 10

Refer to the exhibit.

```
IKEv2:(SESSION ID = 17,SA ID = 1):Processing IKE AUTH message
IKEv2:IPSec policy validate request sent for profile CloudOne with psh index 1.

IKEv2:(SESSION ID = 17,SA ID = 1):
IKEv2:(SA ID = 1):[IPsec -> IKEv2] Callback received for the validate proposal - FAILED.

IKEv2-ERROR:(SESSION ID = 17,SA ID = 1):: There was no IPSEC policy found for received TS
IKEv2:(SESSION ID = 17,SA ID = 1):Sending TS unacceptable notify
IKEv2:(SESSION ID = 17,SA ID = 1):Get my authentication method
IKEv2:(SESSION ID = 17,SA ID = 1):My authentication method is 'PSK'
IKEv2:(SESSION ID = 17,SA ID = 1):Get peer's preshared key for 68.72.250.251
IKEv2:(SESSION ID = 17,SA ID = 1):Generate my authentication data
IKEv2:(SESSION ID = 17,SA ID = 1):Use preshared key for id 68.72.250.250, key len 5
IKEv2:[IKEv2 -> Crypto Engine] Generate IKEv2 authentication data
IKEv2:[Crypto Engine -> IKEv2] IKEv2 authentication data generation PASSED
IKEv2:(SESSION ID = 17,SA ID = 1):Get my authentication method
IKEv2:(SESSION ID = 17,SA ID = 1):My authentication method is 'PSK'
IKEv2:(SESSION ID = 17,SA ID = 1):Generating IKE_AUTH message
IKEv2:(SESSION ID = 17,SA ID = 1):Constructing IDr payload: '68.72.250.250' of type 'IPv4 address'
IKEv2:(SESSION ID = 17,SA ID = 1):Building packet for encryption.
Payload contents:
  VID IDr AUTH NOTIFY(TS_UNACCEPTABLE)

IKEv2:(SESSION ID = 17,SA ID = 1):Sending Packet [To 68.72.250.251:500/From 68.72.250.250:500/VRF i0:f0]
Initiator SPI : 3D527B1D50DBEEF4 - Responder SPI : 8C693F77F2656636 Message id: 1
IKEv2 IKE_AUTH Exchange RESPONSE
Payload contents:
  ENCR
```

Based on the debug output, which type of mismatch is preventing the VPN from coming up?

- A. interesting traffic
- B. lifetime
- C. preshared key
- D. PFS

Answer: B



**Explanation:**

If the responder's policy does not allow it to accept any part of the proposed Traffic Selectors, it responds with a TS\_UNACCEPTABLE Notify message.

**NEW QUESTION 15**

Refer to the exhibit.

```
*Nov 26 00:52:20.002: IKEv2:(SESSION ID = 1,SA ID = 1):Received Packet [From 10.10.10.1:500/To 10.10.10.2:500/VRF i0:f0]
Initiator SPI : D5684E1462991856 - Responder SPI : 2162145C95256F6A Message id: 1
IKEv2 IKE_AUTH Exchange RESPONSE
*Nov 26 00:52:20.002: IKEv2-PAK:(SESSION ID = 1,SA ID = 1):Next payload: ENCR, version: 2.0 Exchange type: IKE_AUTH, flags: RESPONDER MSG-RESPONSE Message id: 1, length: 236
Payload contents:
VID Next payload: IDr, reserved: 0x0, length: 20
IDr Next payload: AUTH, reserved: 0x0, length: 12
Id type: IPv4 address, Reserved: 0x0 0x0
AUTH Next payload: SA, reserved: 0x0, length: 28
Auth method PSK, reserved: 0x0, reserved: 0x0
SA Next payload: TSi, reserved: 0x0, length: 40
last proposal: 0x0, reserved: 0x0, length: 35
Proposal: 1, Protocol id: ESP, SPI size: 4, #trans: 3 last transform: 0x3, reserved: 0x0: length: 8
type: 1, reserved: 0x0, id: 3DES
last transform: 0x3, reserved: 0x0: length: 8
type: 3, reserved: 0x0, id: SHA96
last transform: 0x0, reserved: 0x0: length: 8
type: 5, reserved: 0x0, id: Don't use ESN
TSi Next payload: TSr, reserved: 0x0, length: 24
Num of TSs: 1, reserved 0x0, reserved 0x0
TS type: TS_IPV4_ADDR_RANGE, proto id: 0, length: 16
start port: 0, end port: 65535
start addr: 30.30.30.0, end addr: 30.30.30.255
TSr Next payload: NOTIFY, reserved: 0x0, length: 24
Num of TSs: 1, reserved 0x0, reserved 0x0
TS type: TS_IPV4_ADDR_RANGE, proto id: 0, length: 16
start port: 0, end port: 65535
start addr: 20.20.20.0, end addr: 20.20.20.255
NOTIFY(SET_WINDOW_SIZE) Next payload: NOTIFY, reserved: 0x0, length: 12
Security protocol id: Unknown - 0, spi size: 0, type: SET_WINDOW_SIZE
NOTIFY(ESP_TFC_NO_SUPPORT) Next payload: NOTIFY, reserved: 0x0, length: 8
Security protocol id: Unknown - 0, spi size: 0, type: ESP_TFC_NO_SUPPORT
NOTIFY(NON_FIRST_FRAGS) Next payload: NONE, reserved: 0x0, length: 8
Security protocol id: Unknown - 0, spi size: 0, type: NON_FIRST_FRAGS

*Nov 26 00:52:20.003: IKEv2:(SESSION ID = 1,SA ID = 1):Process auth response notify
*Nov 26 00:52:20.003: IKEv2:(SESSION ID = 1,SA ID = 1):Searching policy based on peer's identity '10.10.10.1' of type 'IPv4 address'
*Nov 26 00:52:20.004: IKEv2-ERROR:(SESSION ID = 1,SA ID = 1):: Failed to locate an item in the database
*Nov 26 00:52:20.004: IKEv2:(SESSION ID = 1,SA ID = 1):Verification of peer's authentication data FAILED
*Nov 26 00:52:20.004: IKEv2:(SESSION ID = 1,SA ID = 1):Auth exchange failed
*Nov 26 00:52:20.004: IKEv2-ERROR:(SESSION ID = 1,SA ID = 1):: Auth exchange failed
Router#
*Nov 26 00:52:20.004: IKEv2:(SESSION ID = 1,SA ID = 1):Abort exchange
*Nov 26 00:52:20.004: IKEv2:(SESSION ID = 1,SA ID = 1):Deleting SA
```

The IKEv2 site-to-site VPN tunnel between two routers is down. Based on the debug output, which type of mismatch is the problem?

- A. preshared key
- B. peer identity
- C. transform set
- D. ikev2 proposal

**Answer: B**

**NEW QUESTION 19**

Refer to the exhibit.

```
*Jul 16 20:21:25.317: ISAKMP (1004): received packet from 192.168.0.2 dport
500 sport 500 Global (R) MM_KEY_EXCH
*Jul 16 20:21:25.317: ISAKMP: reserved not zero on ID payload!
*Jul 16 20:21:25.317: %CRYPTO-4-IKMP_BAD_MESSAGE: IKE message from 192.168.0.2
failed its sanity check or is malformed
```

Which type of mismatch is causing the problem with the IPsec VPN tunnel?

- A. crypto access list
- B. Phase 1 policy
- C. transform set
- D. preshared key

**Answer: D**

**Explanation:**

Reference: <https://www.cisco.com/c/en/us/support/docs/security-vpn/ipsec-negotiation-ike-protocols/5409-ipsec-debug-00.html#ike>

**NEW QUESTION 22**

What uses an Elliptic Curve key exchange algorithm?

- A. ECDSA
- B. ECDHE
- C. AES-GCM
- D. SHA

**Answer:** B

**Explanation:**

Reference: <https://blog.cloudflare.com/a-relatively-easy-to-understand-primer-on-elliptic-curve-cryptography/>

#### NEW QUESTION 25

Which VPN solution uses TBAR?

- A. GETVPN
- B. VTI
- C. DMVPN
- D. Cisco AnyConnect

**Answer:** A

**Explanation:**

Reference: [https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/sec\\_conn\\_getvpn/configuration/xr-3s/sec-get-vpn-xr-3s-book/sec-get-vpn.html](https://www.cisco.com/c/en/us/td/docs/ios-xml/ios/sec_conn_getvpn/configuration/xr-3s/sec-get-vpn-xr-3s-book/sec-get-vpn.html)

#### NEW QUESTION 28

Which parameter must match on all routers in a DMVPN Phase 3 cloud?

- A. GRE tunnel key
- B. NHRP network ID
- C. tunnel VRF
- D. EIGRP split-horizon setting

**Answer:** A

#### NEW QUESTION 32

Which benefit of FlexVPN is a limitation of DMVPN using IKEv1?

- A. GRE encapsulation allows for forwarding of non-IP traffic.
- B. IKE implementation can install routes in routing table.
- C. NHRP authentication provides enhanced security.
- D. Dynamic routing protocols can be configured.

**Answer:** B

#### NEW QUESTION 36

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