

DI-804V with Cisco Pix (no NAT) using IPsec

D-Link VPN Router **DI-804V**

DEVICE INFORMATION | DEVICE STATUS | **BASIC SETUP** | ADVANCED SETTINGS | SYSTEM TOOLS | HELP

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- DEVICE IP SETTINGS
- CABLE/DSL ISP SETTINGS
- ISP ADDITIONAL SETTINGS
- MODEM SETTINGS
- VPN SETTINGS**
- SAVE & RESTART

VPN SETTINGS

Connection Name: 804v-A

Local IPSEC Identifier: []

Remote IPSEC Identifier: []

Remote IP Network: 100 . 100 . 100 . 0

Remote IP Netmask: 255 . 255 . 255 . 0

Remote Gateway IP: 192 . 168 . 168 . 132

Network Interface: WAN ETHERNET

Secure Association: IKE Manual

Perfect Forward Secure: Enabled Disabled

Encryption Protocol: DES

PreShared Key: 123456789

Key Life: 3600 Seconds

IKE Life Time: 28800 Seconds

SAVE

Enable	Connection Name	Local IPSEC ID	Remote IPSEC ID	Command
<input checked="" type="checkbox"/>	804v-A			Edit Del

On Cisco PIX, you need to have the following setup:

Configuring IPsec with IKE

- Create a new access list "222" to define the traffic to protect from Head Office's LAN to Branch Office's LAN

- Create a new transform set named "Tunnel-ESP-DES-MD5" that defines how the traffic will be protected.

You can configure multiple transform sets, and then specify one or more transform sets in a crypto map entry.

- Create a crypto map entry by performing the following steps :

1. Create a new crypto map entry "ForInternet 222" in IPsec ISAKMP mode :

2. Assign an access list to a crypto map entry :

3. Specify the peer to which the IPSec protected traffic can be forwarded :

4. Specify which transform sets are allowed for this crypto map entry.

List multiple transform sets in order of priority (highest priority first).

You can specify up to six transform sets.

- Apply a crypto map set to an interface on which the IPSec traffic will be evaluated.
- Specify that IPSec traffic be implicitly trusted (permitted).

Enabling and Configuring IKE

- Identify the policy to create. Each policy is usually identified by the priority number you assign, and specify the encryption algorithm.
- Specify the hash algorithm
- Specify the authentication method
- Specify the Diffie-Hellman group identifier
- Specify the security association's lifetime (seconds)

Configuring IKE pre-shared keys manually

- Specify the pre-shared key that the PIX Firewall and its peer will use for authentication and peer's address

Imagine the following scenario:

Head Office got a Cisco PIX Firewall with a fixed IP 203.69.175.48/27 and had a LAN 172.16.2.0/24 by NAT
Branch Office got a DI-804V with a fixed IP 203.69.175.53/26 and had a LAN 192.168.2.0/24 by NAT

By based on the following screen captures of the cisco pix in sequence, you should able to get the whole picture

```
Type help or '?' for a list of available commands.  
DrayTekPIX> en  
Password:  
DrayTekPIX# config t  
DrayTekPIX(config)# access-list 222 permit ip 172.16.2.0 255.255.255.0 192.168.2.0 255.255.255.0  
DrayTekPIX(config)#
```

```
PIX passwd:  
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DrayTekPIX# config t  
DrayTekPIX(config)# access-list 222 permit ip 172.16.2.0 255.255.255.0 192.168.2.0 255.255.255.0  
DrayTekPIX(config)# crypto ipsec transform-set Tunnel-ESP-DES-MD5 esp-des esp-md5-hmac  
DrayTekPIX(config)#
```

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Password:

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DrayTekPIX(config)# access-list 222 permit ip 172.16.2.0 255.255.255.0 192.168.0.0 255.255.255.0

DrayTekPIX(config)# crypto ipsec transform-set Tunnel-ESP-DES-MD5 esp-des esp-md5-hmac

DrayTekPIX(config)# crypto map ForInternet 222 ipsec-isakmp

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DrayTekPIX(config)# crypto map ForInternet 222 ipsec-isakmp

DrayTekPIX(config)# crypto map ForInternet 222 match address 222

DrayTekPIX(config)#

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DrayTekPIX(config)# crypto ipsec transform-set Tunnel-ESP-DES-MD5 esp-des esp-md5-hmac

DrayTekPIX(config)# crypto map ForInternet 222 ipsec-isakmp

DrayTekPIX(config)# crypto map ForInternet 222 match address 222

DrayTekPIX(config)# crypto map ForInternet 222 set peer 203.69.175.53 210.243.1.1

DrayTekPIX(config)#

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DrayTekPIX(config)# crypto map ForInternet 222 match address 222

DrayTekPIX(config)# crypto map ForInternet 222 set peer 203.69.175.53 210.243.1.1

DrayTekPIX(config)# crypto map ForInternet 222 set transform-set Tunnel-ESP-DES-MD5

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DrayTekPIX(config)# crypto ipsec transform-set Tunnel-ESP-DES-MD5 esp-des esp-md5-hmac

DrayTekPIX(config)# crypto map ForInternet 222 ipsec-isakmp

DrayTekPIX(config)# crypto map ForInternet 222 match address 222

DrayTekPIX(config)# crypto map ForInternet 222 set peer 203.69.175.53 210.243.1.1

DrayTekPIX(config)# crypto map ForInternet 222 set transform-set Tunnel-ESP-DES-MD5

DrayTekPIX(config)# crypto map ForInternet interface outside

DrayTekPIX(config)#

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Password:

DrayTekPIX# config t

DrayTekPIX(config)# access-list 222 permit ip 172.16.2.0 255.255.255.0 192.168.5

DrayTekPIX(config)# crypto ipsec transform-set Tunnel-ESP-DES-MD5 esp-des esp-\$

DrayTekPIX(config)# crypto map ForInternet 222 ipsec-isakmp

DrayTekPIX(config)# crypto map ForInternet 222 match address 222

DrayTekPIX(config)# crypto map ForInternet 222 set peer 203.69.175.53 210.243.5

DrayTekPIX(config)# crypto map ForInternet 222 set transform-set Tunnel-ESP-DE\$

DrayTekPIX(config)# crypto map ForInternet interface outside

DrayTekPIX(config)# sysopt connection permit-ipsec

DrayTekPIX(config)#

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Password:

DrayTekPIX# config t

DrayTekPIX(config)# isakmp policy 22 encryption des

DrayTekPIX(config)#

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DrayTekPIX# config t

DrayTekPIX(config)# isakmp policy 22 encryption des

DrayTekPIX(config)# isakmp policy 22 hash sha

DrayTekPIX(config)# _

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DrayTekPIX(config)# isakmp policy 22 hash sha

DrayTekPIX(config)# isakmp policy 22 authentication pre-share

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DrayTekPIX(config)# isakmp policy 22 encryption des

DrayTekPIX(config)# isakmp policy 22 hash sha

DrayTekPIX(config)# isakmp policy 22 authentication pre-share

DrayTekPIX(config)# isakmp policy 22 group 1

DrayTekPIX(config)#

```
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DrayTekPIX(config)# isakmp policy 22 encryption des
```

```
DrayTekPIX(config)# isakmp policy 22 hash sha
```

```
DrayTekPIX(config)# isakmp policy 22 authentication pre-share
```

```
DrayTekPIX(config)# isakmp policy 22 group 2
```

```
DrayTekPIX(config)# isakmp policy 22 lifetime 5000
```

```
DrayTekPIX(config)#
```

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Password:
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DrayTekPIX# config t
```

```
DrayTekPIX(config)# isakmp key ABC123 address 203.69.175.53
```

```
DrayTekPIX(config)# _
```