Router1

3des-md5

```
access-list 100 permit ip 192.168.1.1 0.0.0.255 192.168.2.2 0.0.0.255
crypto isakmp enable
crypto isakmp policy 10
authentication pre-share
encryption 3des
hash md5
group 5
lifetime 3600
exit
crypto isakmp key 0 2244 address 25.0.0.2
crypto ipsec transform-set NASIR_SET esp-md5-hmac esp-3des
exit
crypto ipsec security-association lifetime seconds 3590
crypto map CRMAP 10 ipsec-isakmp
match address 100
set peer 25.0.0.2
set transform-set NASIR_SET
exit
int s1/0
crypto map CRMAP
exit
exit
wr
wr
```

3des-sha

```
access-list 100 permit ip 192.168.1.1 0.0.0.255 192.168.2.2 0.0.0.255
crypto isakmp enable
crypto isakmp policy 10
authentication pre-share
encryption 3des
hash sha
group 5
lifetime 3600
exit
crypto isakmp key 0 2244 address 25.0.0.2
crypto ipsec transform-set NASIR_SET esp-sha-hmac esp-3des
exit
crypto ipsec security-association lifetime seconds 3590
crypto map CRMAP 10 ipsec-isakmp
match address 100
set peer 25.0.0.2
set transform-set NASIR_SET
exit
int s1/0
crypto map CRMAP
exit
exit
wr
wr
```

des-md5

```
access-list 100 permit ip 192.168.1.1 0.0.0.255 192.168.2.2 0.0.0.255
crypto isakmp enable
crypto isakmp policy 10
authentication pre-share
encryption des
hash md5
group 5
lifetime 3600
exit
crypto isakmp key 0 2244 address 25.0.0.2
crypto ipsec transform-set NASIR_SET esp-md5-hmac esp-des
exit
crypto ipsec security-association lifetime seconds 3590
crypto map CRMAP 10 ipsec-isakmp
match address 100
set peer 25.0.0.2
set transform-set NASIR_SET
exit
int s1/0
crypto map CRMAP
exit
exit
wr
```

AES -MD5

```
access-list 101 permit ip 192.168.1.1 0.0.0.255 192.168.2.2 0.0.0.255
crypto isakmp enable
crypto isakmp policy 11
authentication pre-share
encryption aes 256
hash md5
group 5
lifetime 3600
exit
crypto isakmp key asdfg address 25.0.0.2
crypto ipsec transform-set NASIR_SET esp-aes 256 ah-md5-hmac
exit
crypto ipsec security-association lifetime seconds 3590
crypto map CRMAP 11 ipsec-isakmp
match address 101
set peer 25.0.0.2
set transform-set NASIR_SET
```

```
exit
int s1/0
crypto map CRMAP
exit
exit
wr
wr
aes-sha
access-list 100 permit ip 192.168.1.1 0.0.0.255 192.168.2.2 0.0.0.255
crypto isakmp enable
crypto isakmp policy 10
authentication pre-share
encryption aes 256
hash sha
group 5
lifetime 3600
exit
crypto isakmp key 0 2244 address 25.0.0.2
crypto ipsec transform-set NASIR_SET esp-aes 256 ah-sha-hmac
exit
crypto ipsec security-association lifetime seconds 3590
crypto map CRMAP 10 ipsec-isakmp
match address 100
set peer 25.0.0.2
set transform-set NASIR_SET
```

```
exit
int s1/0
crypto map CRMAP
exit
exit
wr
wr
des-sha
access-list 100 permit ip 192.168.1.1 0.0.0.255 192.168.2.2 0.0.0.255
crypto isakmp enable
crypto isakmp policy 10
authentication pre-share
encryption des
hash sha
group 5
lifetime 3600
exit
crypto isakmp key 0 2244 address 25.0.0.2
crypto ipsec transform-set NASIR_SET esp-sha-hmac esp-des
exit
crypto ipsec security-association lifetime seconds 3590
crypto map CRMAP 10 ipsec-isakmp
```

match address 100
set peer 25.0.0.2
set transform-set NASIR_SET
exit
int s1/0
crypto map CRMAP
exit
exit
wr

Router2

3des-md5

access-list 100 permit ip 192.168.2.2 0.0.0.255 192.168.1.1 0.0.0.255
crypto isakmp enable
crypto isakmp policy 10
authentication pre-share
encryption 3des
hash md5
group 5
lifetime 3600
exit
crypto isakmp key 0 2244 address 15.0.0.1
crypto ipsec transform-set NASIR_SET esp-md5-hmac esp-3des
exit

crypto ipsec security-association lifetime seconds 3590

match address 100 set peer 15.0.0.1 set transform-set NASIR_SET exit int s1/1 crypto map CRMAP exit
set transform-set NASIR_SET exit int s1/1 crypto map CRMAP
exit int s1/1 crypto map CRMAP
int s1/1 crypto map CRMAP
crypto map CRMAP
evit
EXIL
exit
wr
wr

3des-sha

```
access-list 100 permit ip 192.168.2.2 0.0.0.255 192.168.1.1 0.0.0.255
crypto isakmp enable
crypto isakmp policy 10
authentication pre-share
encryption 3des
hash sha
group 5
lifetime 3600
exit
crypto isakmp key 0 2244 address 15.0.0.1
crypto ipsec transform-set NASIR_SET esp-sha-hmac esp-3des
exit
```

crypto ipsec security-association lifetime seconds 3590

crypto map CRMAP 10 ipsec-isakmp
match address 100
set peer 15.0.0.1
set transform-set NASIR_SET
exit
int s1/1
crypto map CRMAP
exit
exit
wr
wr
<u>Des-md5</u>
access-list 100 permit ip 192.168.2.2 0.0.0.255 192.168.1.1 0.0.0.255
crypto isakmp enable
crypto isakmp policy 10
authentication pre-share
encryption des

hash md5
group 5
lifetime 3600
exit
crypto isakmp key 0 2244 address 15.0.0.1
crypto ipsec transform-set NASIR_SET esp-md5-hmac esp-des
exit
crypto ipsec security-association lifetime seconds 3590

```
crypto map CRMAP 10 ipsec-isakmp
match address 100
set peer 15.0.0.1
set transform-set NASIR_SET
exit
int s1/1
crypto map CRMAP
exit
exit
wr
wr
```

Aes-md5

exit

```
access-list 101 permit ip 192.168.2.2 0.0.0.255 192.168.1.1 0.0.0.255
crypto isakmp enable
crypto isakmp policy 11
authentication pre-share
encryption aes 256
hash md5
group 5
lifetime 3600
exit
crypto isakmp key asdfg address 15.0.0.1
crypto ipsec transform-set NASIR_SET esp-aes 256 ah-md5-hmac
```

crypto ipsec security-association lifetime seconds 3590

crypto map CRMAP 11 ipsec-isakmp

```
match address 101
set peer 15.0.0.1
set transform-set NASIR_SET
exit
int s1/1
crypto map CRMAP
exit
exit
wr
wr
Aes-sha
access-list 100 permit ip 192.168.2.2 0.0.0.255 192.168.1.1 0.0.0.255
crypto isakmp enable
crypto isakmp policy 10
authentication pre-share
encryption aes 256
hash sha
group 5
lifetime 3600
exit
crypto isakmp key 0 2244 address 15.0.0.1
crypto ipsec transform-set NASIR_SET esp-aes 256 esp-sha-hmac
exit
crypto\ ipsec\ security-association\ lifetime\ seconds\ 3590
crypto map CRMAP 10 ipsec-isakmp
match address 100
set peer 15.0.0.1
set transform-set NASIR_SET
```

exit
int s1/1
crypto map CRMAP
exit
exit
wr
wr
<u>Des-sha</u>
access-list 100 permit ip 192.168.2.2 0.0.0.255 192.168.1.1 0.0.0.255
crypto isakmp enable
crypto icakma nalicy 10

access-list 100 permit ip 192.168.2.2 0.0.0.255 192.168.1.1 0.0.0.255
crypto isakmp enable
crypto isakmp policy 10
authentication pre-share
encryption des
hash sha
group 5
lifetime 3600
exit
crypto isakmp key 0 2244 address 15.0.0.1
crypto ipsec transform-set NASIR_SET esp-sha-hmac esp-des
exit
crypto ipsec security-association lifetime seconds 3590
crypto map CRMAP 10 ipsec-isakmp

match address 100

set peer 15.0.0.1

set transform-set NASIR_SET

exit

int s1/1

crypto map CRMAP

exit

exit

wr

wr

GRE routing protocol

Router1

int tunnel 12

tunnel source 15.0.0.1

tunnel destination 25.0.0.2

ip address 10.0.12.1 255.255.255.0

exit

router eigrp 100

no auto-summary

network 192.168.1.0

network 10.0.0.0

exit

end

ROUTER2

int tunnel 12

tunnel source 25.0.0.2

tunnel destination 15.0.0.1

ip address 10.0.12.2 255.255.255.0

exit

router eigrp 100

no auto-summary

network 192.168.2.0

network 10.0.0.0

exit

end

3DES-MD5	3DES-SHA	AES-MD5	AES-SHA
<u>IPSEC</u>	<u>IPSEC</u>	<u>IPSEC</u>	<u>IPSEC</u>
78.628	70.564	46.0	39.619
KBPS	KBPS	KBPS	KBPS
IPSEC/GRE	IPSEC/GRE	IPSEC/GRE	IPSEC/GRE
59.789	68.848	32.0	35.51
KBPS	KBPS	KBPS	KBPS