

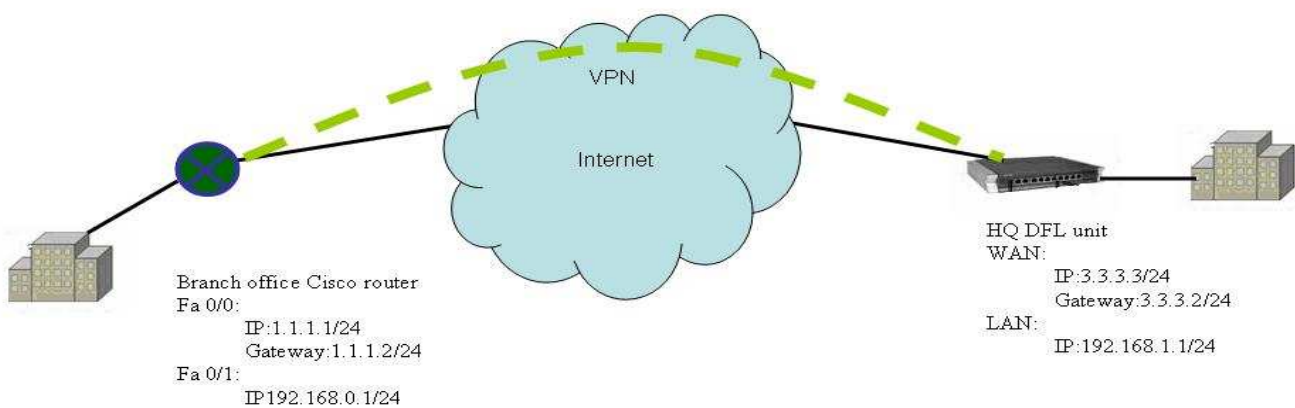
## how to create vpn connection between cisco router and DFL unit.doc

Before the scenario hands-on, we assume that the readers already along with following abilities:

1. The simple routing concept
2. The basic concept for LAN-to-LAN IPSEC.

### Scenario summary:

**DFL-210/800/1600/2500 f/w:v2.12.00**

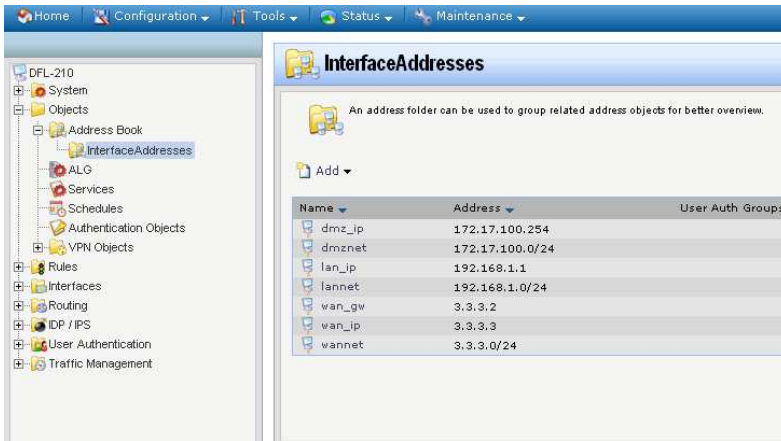


### Object:

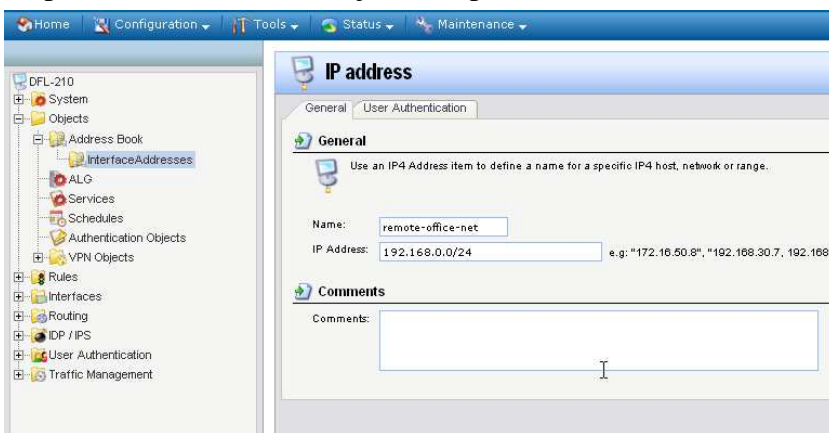
Establish the IPSEC tunnels between HQ and branch office.

## HQ

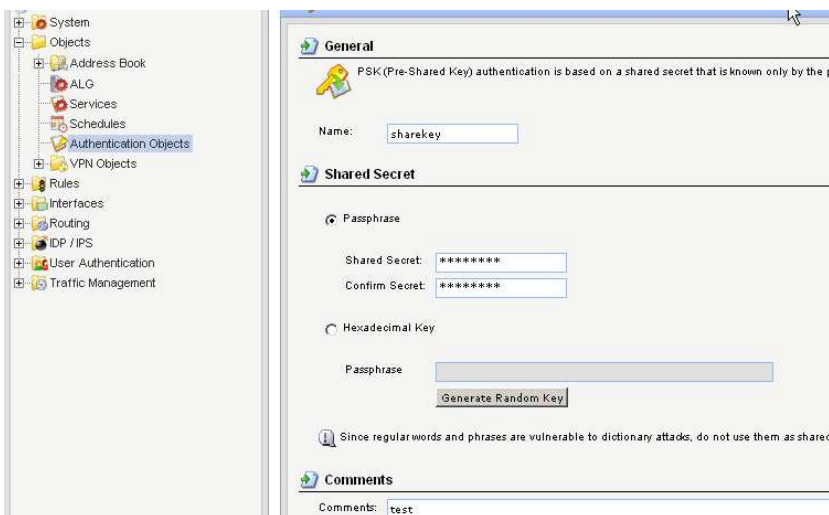
Step1. Set the IP address for Lan and Wan respectively



Step2. Create an address object to represent the Branch office.



Step4. Create a pre-share key object. In this case, we use "test" ASCII string.



Step5. Create a IPsec interface for branch office with the **sharekey** object created in previous step. Please refer the following list for detail configuration parameter:

Property	Valus
Index	1
Name	ipsec_if
LocalNetwork	lannet

RemoteNetwork	remote-office-net
RemoteEndpoint	1.1.1.1
IKEAlgorithms	Medium
IPSecAlgorithms	Medium
IKELifeTimeSeconds	28800
IPSecLifeTimeSeconds	3600
IPSecLifeTimeKilobytes	0
EncapsulationMode	Tunnel
AuthMethod	PSK (Pre-shared keying)
<b>PSK</b>	<b>sharekey</b>
XAuth	Off
DHCPOverIPSec	No
AddRouteToRemoteNet	No
PlaintextMTU	1424
OriginatorIPType	LocalInterface (Local interface)
IKEMode	Main (Mainmode)
DHGroup	2
PFS	None
SetupSAPer	Net (Per network)
DeadPeerDetection	Yes
NATTraversal	OnIfNeeded (Only if needed)
KeepAlive	Disabled
Metric	90
<b>AutoInterfaceNetworkRoute</b>	<b>Yes</b>
MTU	1500
Comments	(none)

The screenshot shows a network configuration interface for an IPsec tunnel named 'ipsec-if'. The interface is divided into two main sections: 'General' and 'Algorithms'.

**General Section:**

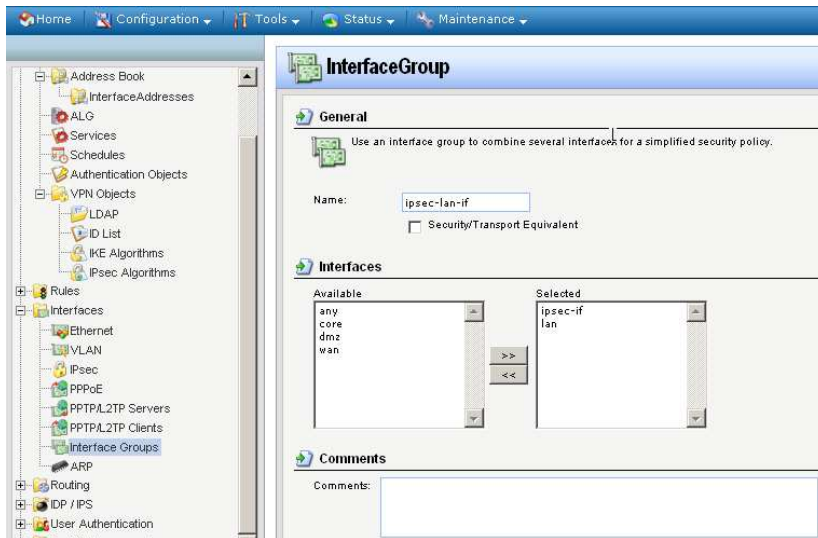
- Name:** ipsec-if
- Local Network:** lanet
- Remote Network:** remote-office-net
- Remote Endpoint:** 1.1.1.1
- Encapsulation Mode:** Tunnel

**Algorithms Section:**

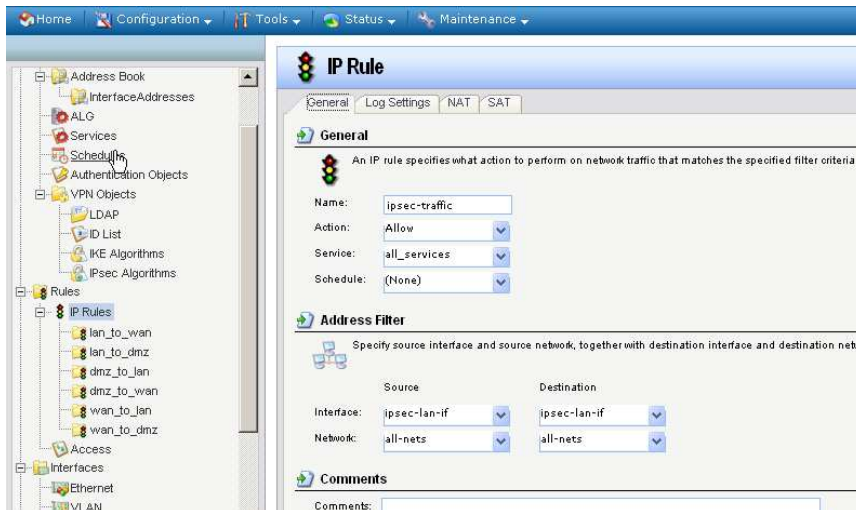
- IKE Algorithms:** Medium
- IKE Life Time:** 28800 seconds
- IPsec Algorithms:** Medium
- IPsec Life Time:** 3600 seconds
- IPsec Life Time:** 0 kilobytes

The interface also includes a navigation pane on the left with various configuration options like Address Book, Interfaces, Rules, and Routing.

Step7. Create an interface group for IP rule setting. This group includes lan, ipsec\_if interface object.



Step8. Create an IP rule to allow both office users accessing computers each other.



## Branch Office

Step1. Set the IP address for Fa 0/0 and Fa 0/1 interface respectively

```
interface FastEthernet0/0
ip address 1.1.1.1 255.255.255.0
duplex auto
speed auto
```

```
interface FastEthernet0/1
ip address 192.168.0.1 255.255.255.0
duplex auto
speed auto
```

Step2. Setup IKE phase 1 parameter

```
crypto isakmp policy 1
encr 3des
authentication pre-share
group 2
lifetime 28800
```

Step3. Setup pre-share key and remote endpoint

```
crypto isakmp key test address 3.3.3.3
?
```

Step4. Setup IKE phase 2 parameter

```
crypto ipsec transform-set 3des-sha1 esp-3des esp-sha-hmac
?
```

Step5. Create add access list to tell router which traffic need to use IPSec encryption

```
access-list 111 permit ip 192.168.0.0 0.0.0.255 192.168.1.0 0.0.0.255
?
?
?
?
```

Step6. Group pre-share key, phase2 setting and access list object to a one crypto map object.

```
crypto map test1 1 ipsec-isakmp
  set peer 3.3.3.3
  set transform-set 3des-sha1
  match address 111
?
?
?
```

Step7. Put the crypto map object on the out going interface

```
interface FastEthernet0/0
crypto map test1
?
```

End of document.