



```
ã€€ã€€pfs=no
ã€€ã€€auto=add
ã€€ã€€keyingtries=3
ã€€ã€€rekey=no
ã€€ã€€ikelifetime=8h
ã€€ã€€keylife=1h
ã€€ã€€type=transport
ã€€ã€€left=%defaultroute
ã€€ã€€leftprotoport=17/1701
ã€€ã€€right=%any
ã€€ã€€rightprotoport=17/%any
```

```
ã€€[/etc/ipsec.d/ipsec.secrets]
ã€€: PSK "Pre Shared Key"
```

```
ã€€[/etc/xl2tpd/xl2tpd.conf]
ã€€[lns default]
ã€€ã€€ip range = 192.168.1.128-192.168.1.254
ã€€ã€€local ip = 192.168.1.175
ã€€ã€€require chap = yes
ã€€ã€€refuse pap = yes
ã€€ã€€require authentication = yes
ã€€ã€€name = IPSecL2TP-VPN
ã€€ã€€ppp debug = yes
ã€€ã€€pppoptfile = /etc/ppp/options.xl2tpd
ã€€ã€€length bit = yes
```

```
ã€€[/etc/ppp/options.xl2tpd]
ã€€ipcp-accept-local
ã€€ipcp-accept-remote
ã€€ms-dns 192.168.1.165
ã€€ms-dns 192.168.1.155
ã€€ms-wins 192.168.1.165
ã€€ms-wins 192.168.1.155
ã€€persist
ã€€#noccpã€€ã€€# i¼œã,³ãf jãf³ãf^ã,çã,lãf^
ã€€auth
ã€€crtstcts
ã€€idle 1800
ã€€mtu 1280ã€€# i¼œ1280ã•«ã%œ´
ã€€mru 1280ã€€# i¼œ1280ã•«ã%œ´
ã€€ndefaultroute
ã€€debug
ã€€lock
ã€€refuse-pap
ã€€refuse-chap
ã€€refuse-mschap
ã€€require-mschap-v2
ã€€proxyarp
```

```
connect-delay 5000
logfile /var/log/xl2tpd.l2tp-ipsec.log
```

```
[/etc/ppp/chap-secrets]
# Secrets for authentication using CHAP
# clientserversecret IP addresses
# username "password"
```

```
[/etc/sysctl.conf]
#IPSec Configuration
net.ipv4.conf.all.send_redirects = 0
net.ipv4.conf.default.send_redirects = 0
net.ipv4.conf.eth0.send_redirects = 0
net.ipv4.conf.lo.send_redirects = 0
net.ipv4.conf.all.accept_redirects = 0
net.ipv4.conf.default.accept_redirects = 0
net.ipv4.conf.eth0.accept_redirects = 0
net.ipv4.conf.lo.accept_redirects = 0
crypto.fips_enabled = 1
#
```

### 3. Installing and starting IPsec

```
[/etc/rc.d/init.d/ipsec start
/etc/rc.d/init.d/xl2tpd start
/sbin/ipsec verify
Checking your system to see if IPsec got installed and started correctly:
Version check and ipsec on-path [OK]
Linux Openswan U2.6.21/K2.6.18-274.18.1.el5 (netkey)
Checking for IPsec support in kernel [OK]
NETKEY detected, testing for disabled ICMP send_redirects [OK]
NETKEY detected, testing for disabled ICMP accept_redirects [OK]
Checking for RSA private key (/etc/ipsec.secrets) [OK]
Checking that pluto is running [OK]
Two or more interfaces found, checking IP forwarding [OK]
Checking NAT and MASQUERADEing
Checking for 'ip' command [OK]
Checking for 'iptables' command [OK]
Opportunistic Encryption Support [DISABLED]
```

```
OK,DISABLED,failed to load 'ipsec verify' module.
```

### 4. Firewall configuration for IPsec

```
500/udp(IKE)4500/udp(NAT-traversal)
FORWARD
```

### 5. NAT configuration for IPsec

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