

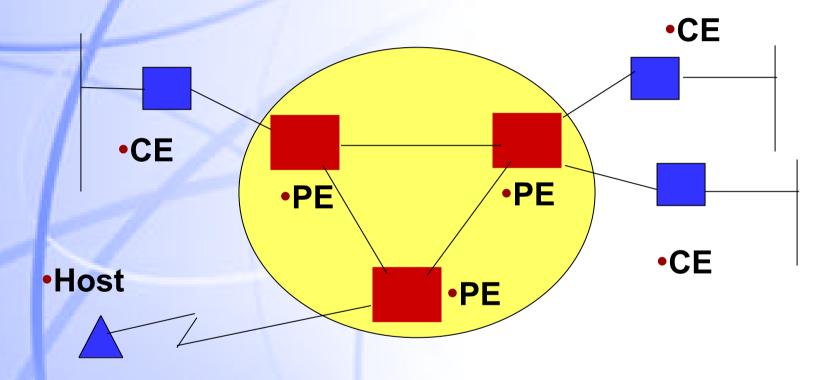
**Uses of IPSEC with VPNs** 

# **Purpose**

- Outline some scenarios where IPSEC can be used with VPNs
- Identify areas where extensions to IPSEC could be useful



### **VPN** Reference Model



•IPSEC can be used for :

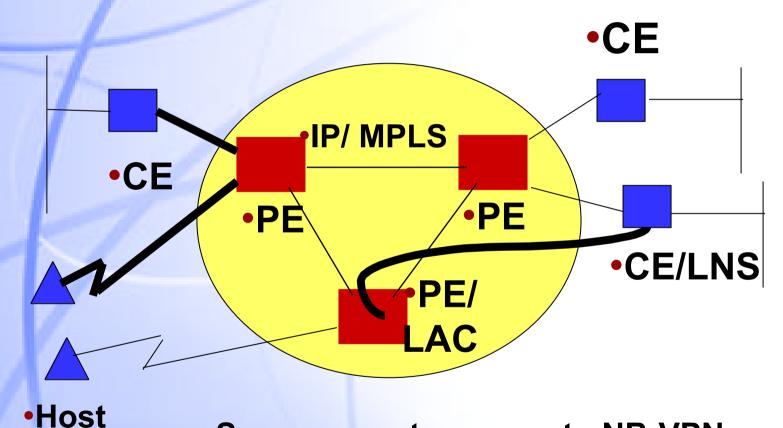
•CE toPE

•PE to PE

•CE to CE



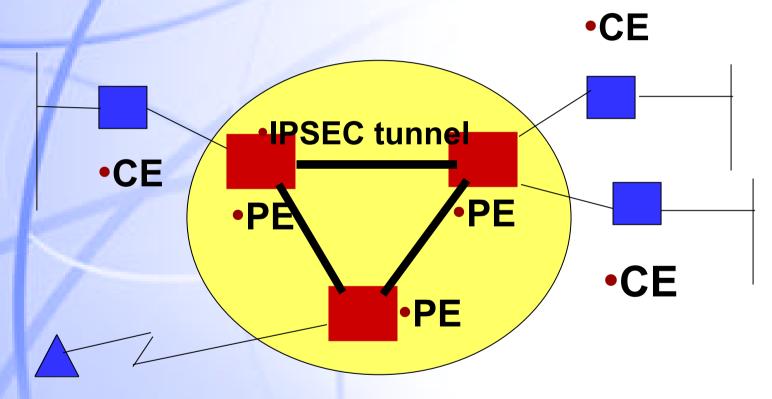
## **CE to PE IPSEC tunnels**



- Secure remote access to NB-VPN
- Compulsory L2TP/IPSEC tunneling



### PE to PE IPSEC tunnels

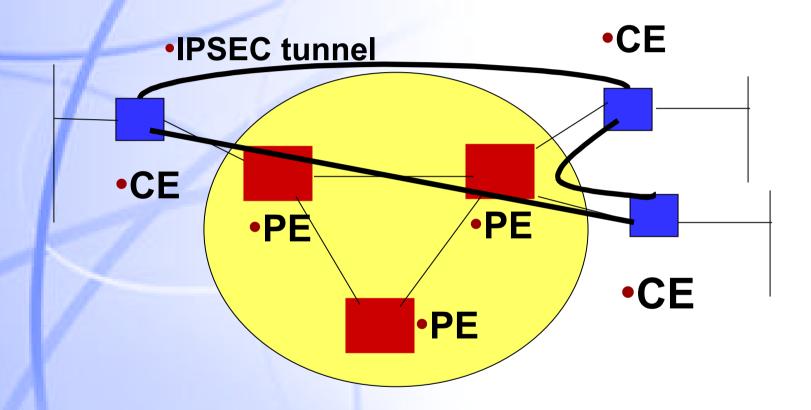


Host

Can be used for both Layer 3 + Layer 2 NB VPNs



## **CE to CE IPSEC tunnels**

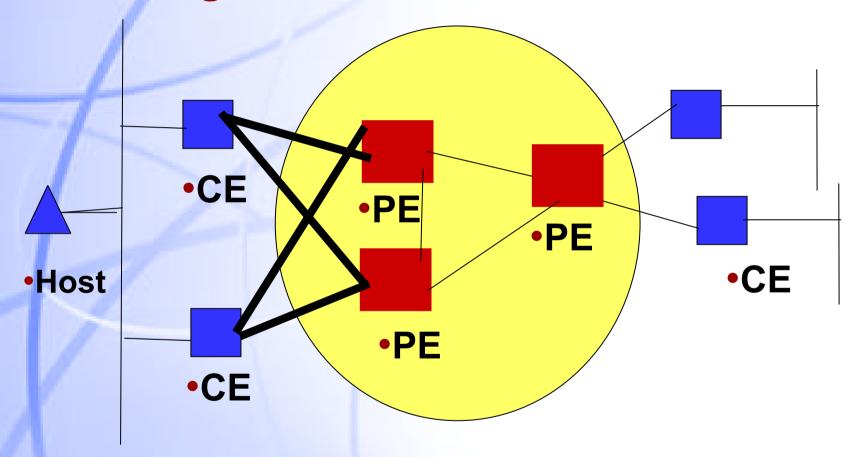


Backbone could be

Non vpn aware; Layer-2 VPN; Layer-3 VPN



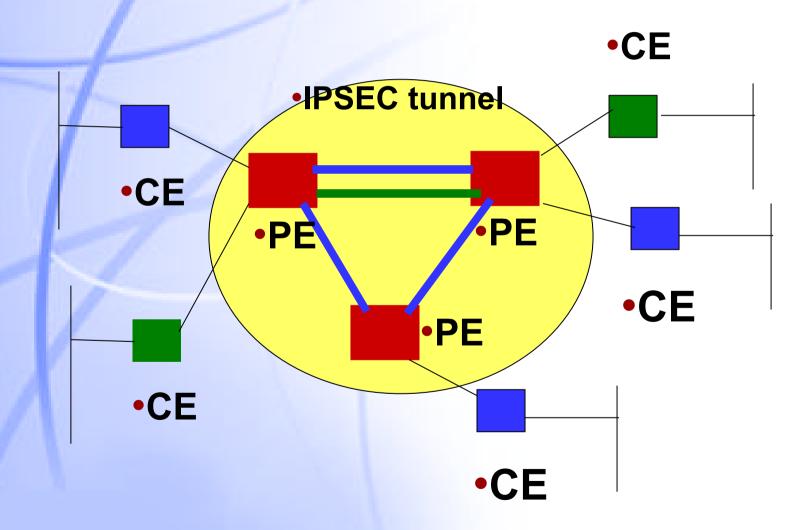
# **Routing over IPSEC tunnels**



Sample scenario: Redundant CE to PE connectivity



# **Associating IPSEC tunnel with VPN**





# **Thank You!**