

# **Nortel Contivity Extranet Switch Interoperability Guide**

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# *1. Nortel Extranet Switch*

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## *1.1. Important notice*

The connections in the following tests were conducted over a LAN, using 192.162.x.x IP addresses for the IPSec endpoints. 192.168.x.x addresses were used to illustrate internal networks (behind the IPSec endpoints). When modifying these samples for Internet use, replace the 192.162.x.x addresses with the external IP address of the IPSec endpoints.

## *1.2. Brief step-by-step instructions*

**To create a VPN using the InJoy IPSec and Nortel Extranet Switch (v2.6 and newer), the following steps must be completed:**

- 1 Install an InJoy product with IPSec ("**Local Host**").
- 2 Install the Pluto IKE server on the InJoy PC.
- 3 Configure the Nortel Extranet Switch ("**Remote Gateway**").
  - 3.1 Define the Nortel Extranet Switch setup
  - 3.2 Define user parameters.
- 4 Configure the InJoy IPSec side.
- 5 Restart the InJoy IPSec product and the IKE server.
- 6 Trigger InJoy to establish the SA. (note: any traffic between IPSec endpoints will force this).

## *1.3. Configuring the Nortel Extranet Switch*

The below example illustrates the Nortel configuration with user based authentication and inner (Red Node) IP address assignment.

**Define general IPSec parameters as shown below:**

**IPsec**

**Configure**

Split Tunneling: Disabled  
Split Tunnel Networks: (None)  
Client Selection:  
- Allowed Clients: Both Contivity and non-Contivity Clients  
- Allow undefined networks for non-Contivity clients: Enabled  
Database Authentication (LDAP):  
- User Name and Password: Enabled  
- RSA Digital Signature: Enabled  
Default Server Certificate: (None)  
RADIUS Authentication:  
- User Name and Password: Disabled  
- AXENT Technologies Defender: Disabled  
- Security Dynamics SecurID: Disabled  
Encryption:  
- ESP - 56-bit DES with MD5 Integrity: Enabled  
- ESP - 40-bit DES with MD5 Integrity: Enabled  
- AH - Authentication Only (HMAC-SHA1): Enabled  
- AH - Authentication Only (HMAC-MD5): Enabled  
Perfect Forward Secrecy: Disabled  
Forced Logout: 00:00:00  
Client Auto Connect: Disabled  
Banner: (None)  
Display Banner: Disabled  
Client Screen Saver Password Required: Disabled  
Client Screen Saver Activation Time: 5 Minutes  
Allow Password Storage on Client: Disabled  
Compression: Enabled  
Relay Timeout: 08:00:00  
Relay Data Count: (None)  
Domain Name: (None)  
Primary DNS: (None)  
Secondary DNS: (None)  
Primary WINS: (None)  
Secondary WINS: (None)  
Client Policy: (None)

**Define user name, password and Inner IP address as shown below:**

**General**

	First	Last
<b>Name</b>	remotel	remotel
<b>Group</b>	/Base/CGIC	

  

	Static IP Address	Static Subnet Mask
<b>Remote User</b>	192.168.71.53	255.255.255.224

Note: The static IP subnet mask is used for IPsec connections only

**User Accounts**

	User ID	Password	Confirm Password	Expires (Days)
<b>IPsec</b>	remotel	*****	*****	Never
<b>PPTP</b>				
<b>L2TP</b>				

## 1.4. *Configuring the InJoy side*

**On the Local Host, add the following section to the ipsec.cnf file (to describe the SA to the Nortel Extranet Switch):**

```
nortel
    Description = "Nortel Extranet Switch",
    Mode = Tunnel,
    Local-IP = "192.162.5.2",           # local host IP address
    Inner-IP = "192.168.71.53",        # Inner (Red Node) IP address
    Remote-IP = "207.35.127.131",      # remote gateway IP address
    Remote-Net = "172.18.1.0",
    Remote-Mask = "255.255.255.0",
    Auth-Type = Client-IdKeyId,
    User-Id = Prompt,                  # ask for username
    AH = No,
    ESP = DES,
    Reinit = Yes,
    Preshared-Secret = "secret_phrase",
```

Restart the InJoy IPsec product and the Pluto IKE server for changes to take effect.

**User-Id = Prompt** allows entering of the user name and password for user based authentication.

## 1.5. *Connecting to the Nortel Extranet Switch*

If user based authentication support is configured, you will be prompted to enter user name and password by the InJoy product. Any traffic to the Remote Subnet behind the Gateway will force IKE negotiations.

**On the Local Host, the ipsec.log will contain the following lines:**

```
Jul 6 02:28:04 : adding to pluto: nortel
Jul 6 02:28:04 : setting pass for pluto: nortel
Jul 6 02:28:04 : force pluto to initiate: nortel
Jul 6 02:28:10 : ipsec: install sa [nortel]
Jul 6 02:28:10 : SA name = [nortel]
Jul 6 02:28:10 : IdKeyId = [remotel]
Jul 6 02:28:10 : Local gateway (host) ip address = [192.162.5.2]
Jul 6 02:28:10 : Inner IP = [192.168.71.53]
Jul 6 02:28:10 : Local net = [192.168.71.53]
Jul 6 02:28:10 : Local net mask = [255.255.255.255]
Jul 6 02:28:10 : Remote gateway (host) ip address = [207.35.127.131]
Jul 6 02:28:10 : Remote net = [172.18.1.0]
Jul 6 02:28:10 : Remote net mask = [255.255.255.0]
Jul 6 02:28:10 : ISAKMP SA lifetime = [3600] seconds
Jul 6 02:28:10 : IPSEC SA lifetime = [28800] seconds
Jul 6 02:28:10 : ESP encr/auth/keylen=[ESP_ALG_CBC_DES/AH_ALG_MD5/24]
Jul 6 02:28:10 : AH method/keylen = [unknown/0]
Jul 6 02:28:10 : Road Warrior = [yes]
```