THIS IS THE WAY

Keeping the Bad Guys Out

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Wireless Security Environment

**Then...**

- Eavesdropping
- Toll Fraud
- Theft of Service
- Tumbling
- Cloning

**Now...**

- Spam
- Spyware
- Man-in-the-middle
- Smurf
- Hijacking
- Phishing
- Scam
- Viruses
- Ping of Death
- Identity Theft
- Worms
- Flooding
- Denial of Service
- Sniffing
- Information Modification
- Snooping

**Challenges: Internet Growth + Advancement in Technology**
Bring Trust Back to the Network

- Protect Brand
- Lower Complexity
- Avoid Cost of Security
- Retain Loyalty
- Protect & Create Revenue

… Evolve from networks with security to truly “secure networks”
Network Based Security Services

- Global network security expects to generate $12.9 billion in 2004 (Source: Yankee Group, 2004)
- 40% of Fortune 500 companies will purchase Web services security solutions (Source: Yankee Group, 2004)
- Global Managed Network Security Services will grow from 7% to 15% of Total Managed Network Services from 2003 to 2008 (Source: Yankee Group, 2004/5)

- Evolving beyond IP VPN to managed firewall, intrusion detection/prevention, vulnerability scans, anti-virus, DoS protection, content filtering and anti-spam
- Scalable approach compared to management of agents on each device
- Reliable with high resiliency and easy to manage
- Low impact to mobile device memory, processing and battery consumption

New Applications...New Segments...New Revenue
Cornerstones of Infrastructure Security

> Confidentiality
   • Prevents information and identity to be disclosed to unauthorized entities or processes.

> Integrity
   • Prevents unauthorized modification and destruction of information

> Strong Authentication
   • Reliable mechanism to authenticate subscribers, devices and applications

> Access Control
   • Strong operator authentication and access control
   • Single logon

> Audit
   • Examination of billing records, journals and logs
   • Audit activities to ensure compliance with established policies and procedures

> Availability
   • Carrier-grade performance with security built-in
Authentication

### Device Application
- EV-DO AN-AAA CHAP/MD5
- IPSec authentication

### Management Users
- Strong password
- Access Control List
- Group Definitions

### Subscribers
- PDSN-AAA CHAP
- HTTP Digest
- MD5 Hashing
- CAVE

**Strong Authentication is key cornerstone to Product Security**
Securing VoIP

Traditional telephony
- Classic strong toll-fraud protection
- Separate networks for “signaling” and “voice”
- Isolation of the service provider equipment from general access
- Phone processing separate from the data network, no connection to the IP world

VoIP
- “Hardening” of communications server operating system
- Virtual isolation of the different types of traffic offers security equal to or better than the physical isolation approach used in PSTN
- Advanced firewalls and VPN techniques as well as commercial grade cryptography and strong authentication mechanisms

Choosing the Right Security Plan Optimizes VoIP delivery
Delivering Secure Communications
Nortel Mobile VPN

Nortel VPN Gateway Capabilities
✓ Persistent & secure IPSec Tunnel
✓ No re-login required or change of IP address when roaming across access network preserving applications connectivity
✓ Avoids complex overlays, increases user productivity and improves experience
Nortel Security Products and Solutions

EXPERIENCE

60 million Nortel IPSec VPN solution clients are deployed in F500 companies worldwide

INDUSTRY LEADING

One of the first companies to build 802.1x authentication into switching

INNOVATIVE

First company in the world to accelerate firewallsing
First to deliver VPN remote access security policy enforcement

PERFORMANCE ENHANCED

Leader in L7 switching performance; number 1 fixed Layer 4-7 switch in the market for six straight years (Dell’Oro 2004)
Beyond Technology… *Best Practices*

> **People and Processes**

> **Systemic and planned approach to security is a must**
  
  - Solid Security *Policy*
  - Business Continuity *Plan*
  - Sound Security *Practices*
  - Employee *Education*
  - Ongoing Assessments
  - Careful *Hiring Practices*

> **Plan for growth in threats**

> **Account for natural human behavior**

> **Manage expectations with partners and vendors**
This is Nortel

> Bringing more **trust** into today’s networks

> **Comprehensive** View of Security
  > Understanding **Security** means understanding **Networks**

> **Open** security solutions

> Extending history of resiliency to security with a **layered defense** architecture

> Building on innovative, award-winning, high performance security products
  > Convergence Security
  > Proactive Threat Protection

We’ve focused on the needs of secure, converged networks meaning converged core capabilities, continued packetization of voice and multimedia IP services, the powerful services edge capability to realize simplification of customer network operations and broadband technologies including wireless and wireline. Around all of this we’ve wrapped security as a technological strategic imperative.

- Bill Owens, CEO, 19 August 2004

**Your Security…Our Commitment**
> THIS IS THE WAY

THANK YOU

> THIS IS NORTEL