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Product Bulletin

Nortel VPN Router 1000 Series

Delivering security for the Internet

The rise of the Internet provides enterprises with a unique opportunity to realize cost savings in their internal and external communications. But the Internet was not designed with security in mind. Enterprises with mission-critical Internet applications must secure the data they transmit, as well as protect their internal networks from outside intrusion. The Nortel VPN Router 1000 series (formerly known as Contivity* 1000 series) is a cost-effective solution delivering secure, comprehensive IP services either in standalone mode or in conjunction with an existing router or Internet access device.

The Nortel VPN Router 1000 series of Nortel VPN Routers (formerly known as Contivity Secure IP Services Gateways) is the answer to enterprises requiring low-cost connectivity across the Internet or managed IP networks. Designed for small sites, the Nortel VPN Router 1000 portfolio provides IP routing, Virtual Private Networking (VPN), stateful firewall, encryption, authentication and bandwidth management services in a single integrated platform.

Consisting of three separate models, the Nortel VPN Router 1000 series provides options for small sites seeking Internet connectivity, either for secure VPN communications or for basic IP/Internet access. With options that include integrated WAN port and 4-port Ethernet switch capability, the Nortel VPN

Nortel VPN Router 1010

Nortel VPN Router 1050

Nortel VPN Router 1100

Router 1000 series is a cost-effective, all-in-one solution for small office/home office environments. Its advanced routing options and built-in VPN capabilities make it ideal either for site-to-site or remote access VPN applications, or for simple Internet connectivity.

Serving the price-sensitive, small-user segment of the secure IP services market, the Nortel VPN Router 1000 series can be installed in a variety of scenarios. Medium to large businesses can deploy the Nortel VPN Router 1000 series as a small branch solution connecting back to their headquarters-based data center. Alternatively, the Nortel VPN Router 1000 can form the basis of a site-to-site

solution within an enterprise or across enterprises in either a hub-and-spoke or small mesh configuration. In addition, the Nortel VPN Router 1000 can serve as an affordable headquarters solution for a small business needing Internet access and/or secure IP services.

Low total cost of ownership

With its low-cost and integrated design, the Nortel VPN Router 1000 is an affordable solution for enterprises. A single multi-service device can address what used to require multiple discrete devices (e.g., router, VPN gateway, firewall) to solve. Further, new IP services can be added without costly hardware upgrades. A flexible software licensing scheme allows Nortel VPN Router to be initially installed as a secure IP access device and later add more VPN tunnel capacity, advanced routing or firewall services via a software license — all while avoiding on-site visits from a service technician.

Security by design

Built on the same Secure Routing Technology (SRT) framework found in the rest of the Nortel VPN Router product line, the Nortel VPN Router 1000 series is designed with security inherent to its operation. SRT integrates the major functional components of the Nortel VPN Router — such as management, access, routing and policies — weaving a consistent security structure across these services. This provides scalability and high performance even when running multiple IP services in the same device. SRT also enables key features, such as dynamic routing (RIP/OSPF) over secure IPSec tunnels, common user security policies across VPN, firewall and routing services, and the ability to turn up new IP services on demand without impacting overall performance.

Further, as a market leader in IP Virtual Private Networking (IP VPN), the Nortel VPN Router has been delivering on the promise of secure end-to-end VPNs for years. IP VPN capabilities are embedded into every Nortel VPN Router 1000 unit.

Flexible IP services

As a standards-based solution, the Nortel VPN Router 1000 can interoperate with existing routing, authentication, directory and security systems and can bridge the transition of new IP services. It can be deployed as an Internet access device, secure VPN gateway or firewall solution and can easily be upgraded with additional services. Advanced routing software enables the Nortel VPN Router to interoperate with any existing router infrastructure. And support for LDAP, RADIUS and X.509 digital certificates enables the Nortel VPN Router to interoperate with existing authentication and/or directory systems.

Easy installation and management

Each Nortel VPN Router 1000 unit has a built-in wizard allowing plug-and-play installation. The wizard automatically connects the Nortel VPN Router 1000 unit to a predefined location for remote configuration and set-up, avoiding costly technician calls to each site.

With the same software and management as higher-end Nortel VPN Router devices, the Nortel VPN Router 1000 series offers a comprehensive management suite. This includes Web-based and command-line based configuration interfaces, SNMP and accounting capabilities via a powerful set of security and system logging tools. The Nortel VPN Router Multi-Element Manager (formerly known as Contivity Configuration Manager [CCM]) further provides centralized configuration solutions for up to 2,500 Nortel VPN Router devices.

Key Nortel VPN Router 1000 series

Features	Benefits
Installation Wizard	Plug-and-play installation out of the box for simple small branch set-up. No technician or "truck roll" is needed.
Modular WAN I/O	Can act as primary WAN router either as a replacement of existing solution or as new routing/VPN deployment.
Dial back-up support	Dial back-up if "primary" Internet (IP) connection goes away or more bandwidth is needed.
Advanced routing	OSPF, VRRP and bandwidth management services allow customers to design robust, high-performance and highly available VPN networks that can scale.
VoIP-friendly	Advanced QoS and integrated SIP application layer gateways (ALGs) ensure the secure and reliable transport of VoIP traffic, including transport across VPN Router's NAT and stateful firewall boundaries
Extensive VPN and security capabilities	Broad support for both branch and remote access VPNs, flexible internal/external authentication options, full PKI support, wire-speed encryption (AES, 3DES) and stateful firewall, DoS protection.
4-port 10/100 Ethernet switch option	No need for an Ethernet switch or hub in small office/home office.
QoS and bandwidth management	Fine grain QoS ensures mission-critical data traffic and/or delay-sensitive voice traffic gets the appropriate level of service for business communications.
Stateful Packet Firewall	Low-cost, high-performance firewall license allows the Nortel VPN Router 1000 to provide firewall function rather than purchasing a separate standalone box.

Technical specifications — features and capabilities

	Nortel VPN Routers — Models 1010, 1050, 1100
IP Routing services	• RIPv1, v2, Open Shortest Path First (OSPF) • 802.1Q VLAN routing • Policy-based routing (next hop traffic filters) • Virtual Router Redundancy Protocol (VRRP) • Data Link Switching (DLSw); SNA encapsulation within IP • Dynamic Routing over IPsec (RFC 3884)
VPN tunneling protocols	• IPsec, including authentication header (AH), encapsulating security protocol (ES) and Internet key exchange (IKE) • Point-to-point tunneling protocol (PPTP), including compression and encryption • Layer 2 Tunneling Protocol (L2TP), including L2TP/IPsec
Encryption	• Data Encryption Standard (DES) • Triple DES (3DES) using 3 independent 56-bit keys; 168-bit key length (effective strength of 128 bits) • Advanced Encryption Standard (AES); 128-bit and 256-bit versions • RC4
User authentication services	• User name and password and NT Domain Login • Internal or external lightweight directory access protocol (LDAP) • Remote authentication dial-in user services (RADIUS) • Hard and soft token support (e.g., SecureID and AXENT) • X.509 Digital Certificates and Smart Cards (support for all major vendors and MS-CAPI)
WAN protocols and services	• Point-to-Point Protocol (PPP); including PPP over Ethernet (PPPoE) • Frame Relay (including FRF.9 compression and FRF.12 fragmentation) • ADSL (G.DMT, G.Lite, ANSI T1.413) with support for PPP and PPPoE over ATM • Dial-on-demand and dial back-up services via integral V.90 modem or ISDN
Bandwidth management; QoS	• User and group-level configurable minimum bandwidth settings • Eight forwarding priority queues • DiffServ (Differentiated Services) with code point marking • 802.1p/DSCP (Differentiated Services Code Point) mapping • Multi-level Random Early Detection (MRED) • Resource Reservation Protocol (RSVP)
Data compression	• IPComp (RFC 3173) for encrypted and non-encrypted traffic • FRF.9 Frame Relay compression
"VoIP-friendly" features	• Secure IPsec transport of VoIP traffic • SIP Application Layer Gateway (ALG) for NAT and Stateful Firewall • Cone NAT (for Nortel Unistim protocol) with NAT 'hairpinning' • FRF.12 fragmentation • Differentiated Services (DSCP) marking/mapping • DSCP marking by Nortel VPN Client
Accounting	• Event, system, security and configuration logging • Internal and external RADIUS accounting • Automatic archiving to external system
Management	• Nortel VPN Router Multi-Element Manager provides multi-box provisioning for up to 2,500 VPN Router devices • Full Web browser-based HTML configuration • Nortel Networks Command Line Interface • SNMP monitoring and alerts • East Install Web tool for plug-and-play installation
Stateful firewall	• Multi-layer stateful packet inspection supporting over 100 network application protocols, including TCP, UDP, FTP, HTTP, H.323, RealAudio, Java, and ActiveX • Defense against major "hacker" attacks, including DOS, SYN flood, Smurf, Ping, Spoofing, Fraggle, and ICMP unreachable • Extensive and customizable logging options • NAT, Proxy and end-user authentication • Unlimited firewall users and policies for tunneled and non-tunneled traffic
Nortel VPN Client	• IPsec (with DES, 3DES and AES encryption) • Microsoft Windows 95, 98, 2000, ME, NT and XP based clients (free/unlimited) • Macintosh, IBM-AIX, SUN-Solaris, HP-UX and Linux (via software license)
Endpoint security	• Tunnel Guard enforces corporate security policies on endpoint PCs by checking for anti-virus, personal firewall or any application software (e.g., patches) before allowing VPN connection
Certifications	• ICSA (International Computer Security Association) certification (IPsec) • Virtual Private Network Consortium (VPNC) Basic Conformance Testing (IPsec)

Technical specifications — physical and operational

	Nortel VPN Router 1010 Up to 30 tunnels	Nortel VPN Router 1050 Up to 30 tunnels	Nortel VPN Router 1100 Up to 30 tunnels
Components	• Memory: 128 MB RAM; 64MB Flash • 300 MHz processor • LAN/WAN interfaces: – 2 10/100BaseT Ethernet ports (RJ-45) – Management/console port (DB-9) • Software: *Standard* – VPN Router O/S with 5 tunnels and RIPv2 routing – Nortel VPN Client software for MS-Windows with unlimited distribution license *Optional licenses* – VPN tunnel upgrade to 30 VPN tunnels – Stateful firewall – Advanced routing (OSPF, VRRP, bandwidth management) – Premium routing (Advancing Routing plus BGP-4) – Data Link Switching (DLSw) – VPN Client for MAC and UNIX • Nortel CD and on-line HTML documentation	• Memory: 128 MB RAM; 64MB Flash • 300 MHz processor • LAN/WAN interfaces: – 1 10/100BaseT Ethernet (RJ-45) – 4-port 10/100 Ethernet switch (RJ-45) – Management/console port (DB-9) • Software: *Standard* – VPN Router O/S with 5 tunnels and RIPv2 routing – Nortel VPN Client software for MS-Windows with unlimited distribution license *Optional licenses* – VPN tunnel upgrade to 30 VPN tunnels – Stateful firewall – Advanced routing (OSPF, VRRP, bandwidth management) – Premium routing (Advancing Routing plus BGP-4) – Data Link Switching (DLSw) – VPN Client for MAC and UNIX • Nortel CD and on-line HTML documentation	• Memory: 128 MB RAM; 64MB Flash • 300 MHz processor • Two PCI expansion slots • LAN/WAN interfaces: *Standard* – 1 10/100BaseT Ethernet (RJ-45) – 4-port 10/100 Ethernet switch (RJ-45) – Management/console port (DB-9) *Optional* – Additional 10/100BaseT Ethernet – Single-port V.35/X.21 – T1/E1 w/integrated CSU/DSU – ISDN BR1 S/T and U interfaces – 56/64K CSU/DSU – ADSL – V.90 dial modem • Software: *Standard* – VPN Router O/S with 5 tunnels and RIPv2 routing – Nortel VPN Client software for MS-Windows with unlimited distribution license *Optional licenses* – VPN tunnel upgrade to 30 VPN tunnels – Stateful firewall – Advanced routing (OSPF, VRRP, bandwidth management) – Premium routing (Advancing Routing plus BGP-4) – Data Link Switching (DLSw) – VPN Client for MAC and UNIX • Nortel CD and on-line HTML documentation
Physical	Length: 8 in. (20.3 cm) Width: 8.5 in. (21.6 cm) Height: 1.75 in. (4.4 cm) Weight: 2.65 lb (1.2 kg)	Length: 8 in. (20.3 cm) Width: 8.5 in. (21.6 cm) Height: 1.75 in. (4.4 cm) Weight: 2.75 lb (1.25 kg)	Length: 10.5 in. (26.7 cm) Width: 8.5 in. (21.6 cm) Height: 1.75 in. (4.4 cm) Weight: 3.8 lb (1.7 kg)
Operating environment	Electrical: 10-240 VAC, 1.5A, 50-60 Hz Temperature: 32-122° Fahrenheit (0-50° Celsius) Relative humidity: • 10%-90% non-condensing • 512 BTU/hour @ 240 VAC	Electrical: 10-240 VAC, 1.5A, 50-60 Hz Temperature: 32-122° Fahrenheit (0-50° Celsius) Relative humidity: • 10%-90% non-condensing • 512 BTU/hour @ 240 VAC	Electrical: 10-240 VAC, 1.5A, 50-60 Hz Temperature: 32-122° Fahrenheit (0-50° Celsius) Relative humidity: • 10%-90% non-condensing • 512 BTU/hour @ 240 VAC
Regulatory approvals	Safety: CSA 22.2 No. 60950, UL 60950, EN/ IEC 60950 EMC: (CE) EN55022, Class B, EN55024 including EN61000-3-2 and EN61000-3-3 CISPR22 (including AN/NZS), FCC Part 15 Class B (US), ICES-003 (Canada), VCCI (Japan)	Safety: CSA 22.2 No. 60950, UL 60950, EN/ IEC 60950 EMC: (CE) EN55022, Class B, EN55024 including EN61000-3-2 and EN61000-3-3 CISPR22 (including AN/NZS), FCC Part 15 Class B (US), ICES-003 (Canada), VCCI (Japan)	Safety: CSA 22.2 No. 60950, UL 60950, EN/ IEC 60950 EMC: (CE) EN55022, Class B, EN55024 including EN61000-3-2 and EN61000-3-3 CISPR22 (including AN/NZS), FCC Part 15 Class B (US), ICES-003 (Canada), VCCI (Japan)

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