NORTEL

Product Brief
Nortel Business Secure Router 222 and 252

Use the Internet or your service provider's managed IP network as a trusted extension of your internal business communication network.

Connect with remote workers, mobile employees and other business locations via secure always-on Internet access.

Do it all with one easy-to-use device that provides security features you wouldn't expect at such an affordable price.

Do your employees need to share applications and files with users in other locations? Do they need to send and receive e-mail, or conduct research or business on the Web? Do employees need secure access into corporate networks from home or via the Internet? Could your business benefit by backing up daily or weekly computer records to an off-site disaster recovery facility?

If so, your organization probably already has some way of transmitting data outside your internal company network. However, traditional options have been limited.

> If you use a modem or fax to communicate between offices, you might wish that you could add security and eliminate toll charges.

> If you use dedicated, leased lines to connect with other sites, you've got security and no toll charges, but you're incurring high fixed costs and getting little flexibility.

> If you use dial-up connections to the Internet, your employees are probably tired of waiting. Today's Web pages and Web-based applications are so media-rich and bandwidth-hungry that dial-up service is frustratingly slow even for casual users.

> If you have looked at high-end enterprise solutions, you've probably seen a lot of sophisticated features that your organization will never use, and you wonder if you'll need a technical guru to manage it all.

Would you like to be able to connect to business applications and resources without these obstacles or limitations? Would you like to be able to do it securely and fast, with one simple, affordable and easy-to-manage device? If so, Nortel has the answer for you.

Nortel Business Secure Router family

The Nortel Business Secure Router family, designed specifically for small and mid-sized businesses, enables you to secure broadband connections to your internal network, to other business locations, to your business applications remotely and enjoy high-speed, always-on access to the Internet. The family includes two models — Business Secure Router (BSR) 222 and Business Secure Router (BSR) 252.

Both units offer the same high-speed, built-in security and advanced Quality of Service (QoS) features that enable employees to use information more

quickly and effectively — to deliver elevated levels of customer service. The difference is how the respective routers gain access to the Internet.

With Business Secure Router 252, all you require to access the Internet is high-speed DSL (digital subscriber line) service from an Internet service provider. Business Secure Router 222 requires you to subscribe to DSL or cable service from an Internet service provider, and connect it into the DSL or cable modem that accompanies that service. The Business Secure Router 222 and 252 — which have a built-in ADSL2+ and modem — provide the secure link from your internal company network to the Internet access service, off-site employees and other business locations.

Offer enterprise-class data and security at a small-business price. Any number of routers can connect your data network across locations, or to the Internet through cable modems or DSL telephone lines. What makes the Business Secure Router superior to other products is the high degree of security and the intelligent QoS they offer — especially at such an attractive price. These all-in-one routers include a rich feature set tailored for a small and medium-sized business.

Support a full range of voice and data services. The Business Secure Router 222 and 252 support all the voice and data features of your Nortel communication servers and IP phones. Hundreds of calling features, voice messaging, Unified Messaging, Automated Attendant, Contact Centers… these capabilities and more can span multiple locations.

Create secure networks over the public Internet. Virtual private networks (VPNs) enable you to use the Internet as your own private network. You can establish secure connections with home-based workers, business partners and satellite locations far beyond the reach of the internal company network. VPNs carry the private data traffic on a logical connection — a secure, encrypted "tunnel" over a public IP network. The Business Secure Router family supports up to 10 simultaneous tunnels or 10 secure "IPSec tunnels" — the term for VPN-connected devices that use the IPSec security protocol.

Ten tunnels offer a lot of flexibility. For instance, you could set up a VPN tunnel to another router to create secure office-to-office communications, with an employee's laptop to enable secure access to the network from home, or secure access for a whole team of outside sales people.

Remote users simply install IPSec client software on their laptops, and then they can securely connect to the company network and access its voice and data resources. Users can work from anywhere, while satisfying even stringent security requirements.

Protect the confidentiality, authentication and integrity of data in transit. Traffic is encrypted to prevent eavesdropping. Even if data traffic could be seen, it would be unreadable by anyone except the intended recipient, whose device has the sole "key" to decipher the message at the other end.

Prevent hackers and viruses from getting into your network. A built-in firewall provides a perimeter defense to guard your business network against unauthorized users, such as those trying to "spoof" or pretend to be legitimate users. The advanced firewall with "stateful packet filtering" can grant or deny network access based on time of day, application, IP address, port range and other attributes. Ultra-granular control enables Web or data traffic to be restricted while still letting voice over IP (VoIP) calls pass through.

Prioritize your most important services. Some data services, such as VoIP, are sensitive to even the slightest delay, while others, such as e-mail or fax, can receive secondary treatment if necessary. That's why Business Secure Routers support class-based QoS. They understand that voice traffic must reach its destination within milliseconds, and give it highest priority treatment. As long as the wide area network (WAN) has also been engineered for voice-grade service, the voice call will be clear and smooth. The router can also prioritize other applications or classes of service, to ensure appropriate delivery of packets where and when needed.

Increase security and flexibility in IP addressing. Network Address Translation (NAT) converts internal IP addresses into your public IP address and vice versa. By hiding your private IP addresses from the world, NAT provides an extra layer of security. NAT can also be used to share static addresses across a group of users who need exclusive, but temporary, use of a static IP address.

Since static IP addresses can be costly, this can translate into hard cash savings for your company.

A Dynamic Host Control Protocol (DHCP) function within both the Business Secure Router 222 and 252 automatically issues IP addresses as needed. In addition to its value for sharing IP addresses through NAT, DHCP enables mobile users to simply walk into a wireless IP hotspot, and their VoIP-equipped laptop is automatically ready to make and receive calls.

Connect to the Internet and intranet through one link. A single physical interface can support multiple IP addresses for internal and external communications — each with its own filters and policies. For instance, on one WAN link, you could set up:

> An Internet connection that limits inbound traffic, so users could browse the Web for legitimate research but not download huge music or video files

> Another private virtual connection that permits free flow of traffic on your company's internal network

> A third connection for remotely managing the router over the Web, yet thwarting hackers by permitting no internal routing from this virtual connection

Easy to set up, use and manage with Nortel Business Element Manager

For you and your users, the business communication system should be almost invisible — a no-worry, no-hassle conduit for all the critical information flow of business.

That's why we designed the Business Secure Router to be plug-and-play. A configuration wizard guides you through the simple steps of setting up the router and going live. If you want to delve into more advanced functions, there's online help on the management interface, and full documentation that comes with the routers.

You can activate, set up and manage applications from any workstation that has LAN or Web access, using Nortel Business Element Manager, browser-styled management software with graphical inter-faces and step-by-step wizards. Business Element Manager enables management for the entire Nortel small and medium-sized business portfolio including Nortel Business Communications Manager, Nortel Business Access Point 120 and Nortel Business Ethernet Switch 50/100/200/1000. You can simplify your network management needs by managing all the elements of your business network from one consistent, familiar interface.

Business communications made simple

Don't take chances with your business communications. Count on the company that has been delivering telephony and data systems to the world's largest service providers and enterprises for decades — the company that pioneered the digital revolution, reinvented business networking in the Internet Age, and is a leader in small and medium business telephony.

To find out how your business can take advantage of secure communications with other business locations and the Internet, contact your local reseller or visit us on the Web at *www.nortel.com*.

The Nortel Secure Business Router portfolio

The Business Secure Router 222 and 252 are about the size of a package of printer paper and can be mounted conveniently on a wall or placed on a desktop.

Business Secure Router 222 is a converged broadband access router that provides a secure connection to the Internet via Fast Ethernet broadband services.

On the front of the Business Secure Router 222 unit are four ports for connecting devices on your local area network (LAN) and one port for connecting to the DSL modem or cable modem, which in turn connects to your Internet service provider's network and the Internet.

Business Secure Router 252 is a converged broadband access router that provides a secure connection to the Internet through a built-in ADSL2+ interface which provides 24-Mbps downstream and 1-Mbps upstream data rates.

On the front of the Business Secure Router 252 unit are four ports for connecting devices on your LAN and one port for connecting to the telephone line wire, which in turn connects to your Internet service provider's network and the Internet.

Both models have LEDs that show the status of each port. Green LEDs indicate that the port is operating at 100 Mbps, while yellow denotes a port operating at 10 Mbps. LEDs flash when the port is sending or receiving data. A green LED on the front panel also shows that the unit is functioning normally.

On the back of the unit is a serial port for connecting to a modem for WAN backup in the case of a DSL or cable modem service failure. The router also comes with a converter to transform AC utility power into the 18V DC power used by the unit.

Nortel Business
Secure Router 222

Nortel Business
Secure Router 252

Input/output ports

Business Secure Router 222
• One (1) WAN port: 10/100 Base-T Auto-sensing for RJ-45 connector
• Four (4) LAN ports: Ethernet 10/100 Mbps

Business Secure Router 252
• One (1) WAN port: Built-in ADSL2+ modem for RJ-11 connector
• Four (4) LAN ports: Ethernet 10/100 Mbps

Virtual private network (VPN) services
• Ten (10) IPSec tunnels – Branch and client terminations
• IKEv1 Main Mode and IKEv1 Aggressive Mode
• Up to three (3) IP pools for client
• Sixteen (16) split networks configured; 64 subnets specified for split (inverse) network
• Diffie-Hellman Group 1, 2
• IPSec tunnel mode, IPSec transport mode
• Support for dynamically addressed peers – ABOT
• Network address translation (NAT) traversal
• Keep Alive – For branch-office tunnels and client tunnels
• Termination and emulation – Nortel VPN Router clients

Encryption services
• DES (Data Encryption Standard), 3DES (Triple-DES)
• AES-128 (Advanced Encryption Standard 128) – Branch-office and client tunnels
• AES-192 and AES-256 – Branch-office tunnels
• SHA-1 and MD-5

Authentication services
• Pre-Shared Secrets
• Microsoft, Entrust and Verisign digital certificates; PKCS #10 and #7 certificates
• Certificate Management Protocol (CMP)
• External RADIUS support
• 802.1x/EAP support

Firewall protection
• Stateful packet inspection
• IP Application Inspection (FTP, SMTP, HTTP. Telnet, SSL, DNS, etc.)
• Denial of Service (DoS) detection and prevention
• URL filtering
• Content filtering

IP services
• Network Address Translation (NAT): Many-to-one, static, many-to-many, many one-to-one; port forwarding; IPSec pass-through; multiple simultaneous VPN connections; SIP and H.323 Application Layer Gateway (ALG); port-restricted cone NAT; NAT support for tunnel-mode IPSec tunnels
• IP routing: Clear text routing, static routing, RIP v1 and v2, IGMP
• Dynamic Host Control Protocol (DHCP): Client, server, relay, static mapping (eight IP address lease mapping)
• Domain Name Service (DNS): DNS proxy, dynamic DNS
• Network Time Protocol (NTP)
• Quality of Service (QOS): Class-based queuing and bandwidth allocation

Layer 2 protocols
• Business Secure Router 222: Point-to-point tunneling protocol (PPTP), Point-to-point protocol over Ethernet (PPPoE), Ethernet Encapsulation
• Business Secure Router 252: Point-to-point protocol over ATM (PPPoA), Point-to-point protocol over Ethernet (PPPoE), RFC1483, Ethernet Encapsulation
• IP masquerade/alias – Configurable MAC address

Management
• Central and integrated management by Nortel Business Element Manager
• Web graphical user interface
• Command-line interface
• Built-in diagnostic tool
• SNMPv1/v2
• TFTP/FTP firmware upload
• Remote management via FTP/Telnet/Web
• Configuration backup and restore via FTP and Web serial console port

Physical
• Dimensions: 5.7 x 7.7 x 2.2 in/14.5 x 19.5 x 5.5 cm (W x D x H)
• Weight: 0.9 lbs/0.4 kg

Environmental
• Operating temperature: 0ºC to 50º Celsius, 32º – 122º Fahrenheit
• Humidity: Up to 90 percent (non-condensing)
• Altitude: Up to 10,000 feet (3,050 meters)

Nortel is a recognized leader in delivering communications capabilities that enhance the human experience, ignite and power global commerce, and secure and protect the world's most critical information. Our next-generation technologies, for both service providers and enterprises, span access and core networks, support multimedia and business-critical applications, and help eliminate today's barriers to efficiency, speed and performance by simplifying networks and connecting people with information. Nortel does business in more than 150 countries. For more information, visit Nortel on the Web at **www.nortel.com**.

For more information, contact your Nortel representative, or call 1-800-4 NORTEL or 1-800-466-7835 from anywhere in North America.

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