> THIS IS **THE WAY**

TO DELIVER SECURE INTERNET AND DATA SERVICES ON

THE SAME PLATFORM YOU USE FOR VOICE TELEPHONY

> THIS IS **NORTEL**™

Solution Brief

Nortel Business Communications Manager Data Networking and Security

You may think of the Nortel Business Communications Manager as a full-featured voice telephony system. It is, but this versatile platform also provides a rich array of data services that meet the requirements of most small- to medium-sized sites. Local and wide area networking, Internet access, IP telephony... these data services and more can be securely delivered without adding external routers.

Converging voice and data services in one platform offers several important advantages, such as lower network cost of ownership, tight integration between voice and data networking features, and greater reliability and ease of management, compared to solutions that rely on multiple components.

Full-featured IP router — built right in

Nortel Business Communications Manager 200 and 400 platforms come with a built-in IP router that supports industry-standard routing protocols

and a broad range of data services. The smaller Business Communications Manager 50 platform offers the integrated broadband router as an option — either Ethernet or ADSL — for Internet access or branch networking.

Robust, reliable and secure data services — all in one box

Here's a sampling of the data services and capabilities you can get from your Business Communications Manager system:

Create secure networks over the public Internet. Virtual private networks (VPNs) enable you to enjoy secure connectivity with branch offices, business partners and remote users far beyond the reach of private networks. VPNs carry the private data traffic on a logical connection — a secure, encrypted "tunnel" over a public network.

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

Protect the confidentiality of data in transit. Business Communications Manager platforms use industry-standard IPsec protocols to protect Internet communications through encryption, authentication, confidentiality, data integrity, anti-replay protection and protection against traffic flow analysis. Communications to and from the Web can also be protected by the widely used Secure Sockets Layer (SSL) protocol, which provides data encryption, server authentication, message integrity and optional client authentication.

Extend secure access to mobile users and telecommuters. Remote users simply install IPsec client software on their laptops, or use a small IPsec device such as a Nortel VPN Router 1100 —

and they can then securely connect to the Business Communications Manager network and access its voice and data resources. Users can work from anywhere, while satisfying even stringent government security requirements.

Prevent hackers and viruses from entering your business. A built-in firewall and intrusion detection system provide a perimeter defense to guard your internal network, computers and employees from unauthorized access, such as Trojan horse attacks or hackers trying to "spoof" their way in by pretending 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 IP telephony calls pass through.

Prioritize your most important data services. Some data services, such as IP telephony, are sensitive to even the slightest delay, while others, such as email or fax, can receive secondary treatment if necessary. Business Communications Manager platforms accommodate these differences with quality of service (QoS) capabilities that recognize and prioritize voice traffic for fastest treatment, even if you are using an external router.

Business Communications Manager data and security features at a glance

Application	Business Communications Manager 50	Business Communications Manager 200	Business Communications Manager 400
Site-to-site VPN capabilities	✓	✓	✓
Client-side VPNs for remote/mobile users	(with a gateway)	✓	✓
IPsec protections	✓	✓	✓
SSL for Web communications		✓	✓
Stateful firewall	✓	✓	✓
Intrusion detection system	✓	✓	✓
Support for DiffServ	✓	✓	✓
Integrated QoS capabilities		✓	✓
Web caching		✓	✓
Network Address Translation (NAT)	✓	✓	✓
Dynamic addressing with DHCP	✓	✓	✓
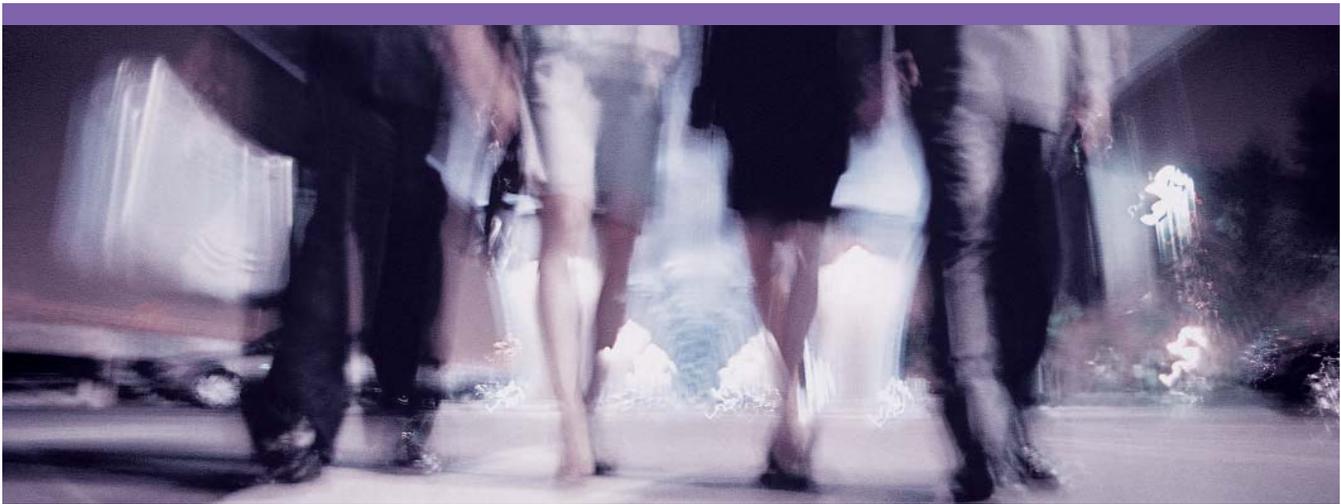
Conserve valuable bandwidth by avoiding unnecessary network traffic. For instance, frequently-visited Web pages, such as the business home page, can be cached on the local system and updated automatically — thereby eliminating the need to go back through the Internet every time this page is requested. An internal Domain Name System (DNS) function remembers the IP address of previously accessed Web pages, so the system doesn't even have to go through the Internet for a URL-to-IP conversion when a site is revisited.

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 the Business Communications Manager platform 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 hot spot, and their IP telephony-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 up to five IP addresses for internal and external communications, each with its own filters and policies. For instance, on one wide area network (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 Business Communications Manager unit over the Web, yet thwarting hackers by permitting no internal routing from this virtual connection

This is the way premium data services are made affordable and achievable. This is Nortel.

Your Business Communications Manager system with embedded router makes an attractive package for small sites wishing to become Internet-capable, medium-sized sites that formerly couldn't be included in the corporate WAN because the cost was too high, and managed service providers who want the convenience of bundling voice and data in a single, easy-to-manage platform.

Discover for yourself the advantages of converged voice and data services on Business Communications Manager platforms. For more information, contact your local reseller or visit us on the Web at: www.nortel.com/bcm

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. Serving both service provider and enterprise customers, Nortel delivers innovative technology solutions encompassing end-to-end broadband, Voice over IP, multimedia services and applications, and wireless broadband designed to help people solve the world's greatest challenges. 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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