

fast

**efficient**

exchange of data

is a prerequisite for success

## **Application Brief** **Business Communications** **Manager** **Data Services**

Business Communications Manager provides a turnkey, future-proof solution that includes built-in routing capabilities, offering support for data networking as well as IP telephony.

In today's competitive environment, the fast, efficient exchange of data between corporate branch offices is a prerequisite for success. Until now, achieving this level of connectivity has required the purchase of separate routers, switches, and hubs, posing system integration and management challenges that small- and medium-sized businesses were not prepared to meet.

Nortel Networks delivers a solution capable of meeting all the data and voice networking needs of a company from a single, easily managed device.

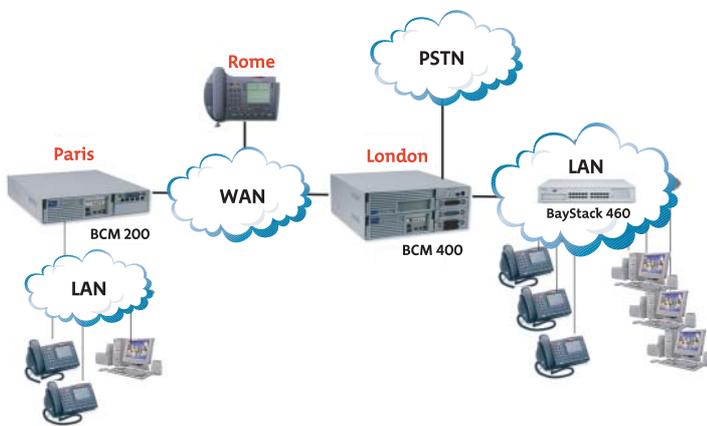
### **Cost-effective connectivity strategies**

Business Communications Manager delivers Internet connectivity to all users of a company, enabling them to communicate via email, access Web sites, and share files between branch locations. The unit features a built-in high-performance IP edge routing capability for LAN, WAN and ISP connectivity and leverages the best of the capabilities of Nortel Networks Contivity extranet switches, BayRS, Apache servers and Windows NT RRAS. Internal and remote access to corporate intranets is supported, providing universal access to key corporate resources. By supporting multiple IP addresses on the same WAN interface, both private intranets and the public Internet can now be accessed over the same connections.

This approach dramatically reduces the cost of providing connectivity to essential business resources.

### Real savings through simplified network infrastructure

To reduce the cost of branch-to-branch telecommunications, excess bandwidth between corporate sites can now be used to support toll-free IP trunking. Infrastructure costs are also reduced by using the data network's Category 5, coaxial, and fibre optic cabling infrastructure to support IP telephone sets. This approach overcomes the need for maintaining separate cabling plants for data and telephony, adds additional cabling range and flexibility and eliminates the traditional 1 km limitation for establishing hard-wired connectivity to the PBX. Additionally, support for both digital- and IP-based telephony will maintain the viability of any Norstar hardware in the network, protecting equipment investments while providing a smooth migration path to the more efficient IP-based infrastructure of Business Communications Manager.



### Prioritising traffic in high-density environments

Real-time IP applications, such as voice, are delay sensitive, and conventional Ethernet hubs will not be adequate to ensure the bandwidth necessary for high voice quality. Network performance can be optimised by deploying the BayStack 460-24T-PWR Switch to prioritise latency-sensitive voice traffic over conventional data transmissions – such as email or file transfers – and provide power over the Ethernet for IP telephony. Further, the Business Communications Manager provides 802.1Q VLAN support, allowing IP telephony to be supported in a VLAN environment.

### Site-to-site security solutions

For companies who need to establish secure server-to-server communication between sites, Business Communications Manager enables businesses to create high-security Virtual Private Networks (VPNs) over the public Internet. VPNs provide encrypted tunnels that eliminate the high costs of leased-line connectivity, allowing sensitive data to be safely and cost-effectively transmitted over the public Internet. Ideal for financial institutions and other organisations that require airtight security, VPNs can be easily established with a Nortel Networks Contivity Extranet Switch, a Nortel Networks Shasta 5000 Broadband Service Node or another Business Communications Manager. In addition, IPSec client support enables the telecommuter or home-based worker to establish secure access to the corporate network, through a secure Contivity Extranet Client.

## Technical specifications

<b>WAN interfaces</b>	V.35, X.21, ISDN, PRI/BRI dial on demand
<b>WAN protocols</b>	Frame Relay, FRF.9, PPP, MLPPP, RIP/2, OSPF, IP, direct and group mode, maximum of five IP addresses per interface
<b>LAN interface</b>	Ethernet 10/100 Mbps
<b>LAN protocols</b>	IP, PPP over Ethernet
<b>LAN to LAN forwarding</b>	120k packets per second
<b>DHCP</b>	Server and relay agent
<b>Security/firewall</b>	Network Address Translation (NAT), Port Address Translation (PAT), stateful packet filtering
<b>Tunnelling protocols</b>	PPTP, IPSec
<b>Encryption</b>	Triple DES (128-bit key)
<b>Device authentication</b>	IKE-preshared keys, Diffie-Hellman, PAP/CHAP, SHA (160-bit hash), MD5 (128-bit hash)

## Business-critical reliability

In most business environments, downtime is simply not an option. To protect against downtime, Business Communications Manager can be equipped with dual, mirrored hard drives and a redundant power supply. This significantly enhances the reliability of the system and ensures that no data will be lost in the event of a hard drive malfunction. Data is continuously mirrored to the secondary hard drive, which gracefully reboots the unit if the primary drive fails. Network management software automatically receives a fault message if a failure occurs.

## It's your choice – voice, data or both

Business Communications Manager uniquely provides a voice, data and applications solution in a single box. Let us show you how Business Communications Manager can cut your operating costs, simplify network management, save on toll charges, increase productivity, boost revenues and give you the Internet advantage.

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**[www.nortelnetworks.com](http://www.nortelnetworks.com)**

For more information, please call your Nortel Networks representative or visit our Web site.

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