



## Solution Brief

### Nortel Communication Server 1000

*The foundation of your unified communications experience*

**Provide all your employees — whether they're working from home, on the road, in a branch office or at headquarters — access to productivity-enhancing IP telephony solutions and applications.**

**Offer your customers elevated levels of service through improved employee contact, extended reach and always-on communications.**

**Do it all with an open, secure, resilient and flexible platform that enhances productivity, improves user accessibility and enables unified communications.**

#### Nortel Communication Server 1000

Nortel Communication Server 1000, one element of a complete portfolio of unified communication solutions from Nortel, is a full-featured, highly scalable IP communications system that meets the needs of enterprises from small to large.

Communication Server 1000 offers a comprehensive array of reliability and survivability mechanisms to ensure the

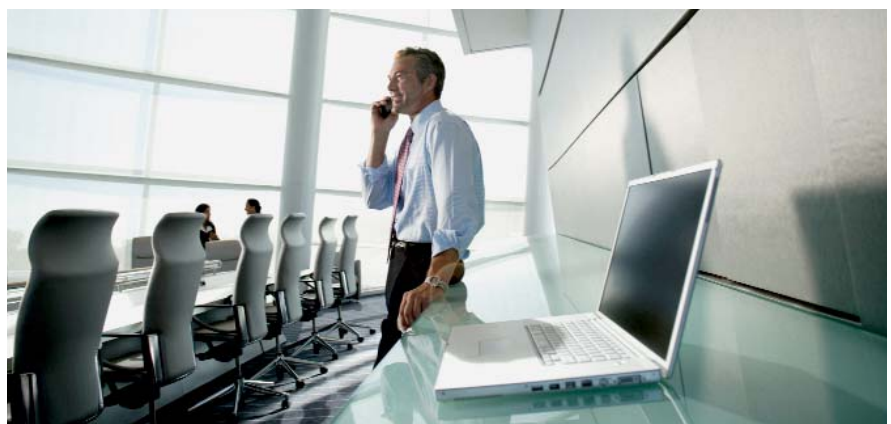
integrity of your network, while enabling communications security through a full suite of security features and capabilities. Communication Server 1000 extends Nortel's comprehensive array of business-critical telephony features and multimedia applications to any user that needs them — anywhere on the network.

#### Resilient to ensure business continuity

Ensuring the integrity of your telephony infrastructure is critical to business success, which is why Communication Server 1000 was specially designed with no single point of failure. The platform can also be deployed with an array of reliability and redundancy mechanisms to ensure that even in adverse conditions, business continues as usual.

#### Communication Server 1000 portfolio

| Product                    | Where it fits   |
|----------------------------|---|
| Communication Server 1000M | Well suited for Meridian 1 customers that are TDM-centric and want to maintain investment in their existing infrastructure while evolving to enjoy the benefits of IP applications and services and enabling themselves for unified communications          |
| Communication Server 1000E | Ideal for new customers that are IP-centric and want a best-of-breed reliable and secure IP Telephony solution with a broad portfolio of productivity-enhancing applications and services while providing a foundational element for unified communications |



## Campus mirroring

Communication Server 1000E's fault tolerance and operational resilience enable active and inactive call servers to be physically separated on different floors or in different buildings across a campus environment.

With redundant call servers that can be separated from each other over a high-speed, reliable data link, if a disaster such as a fire or flood causes one call server to fail, the redundant call server will automatically take over.

## Geographic redundancy

Since system failures are not always localized, enterprises must have broad-reaching failover mechanisms that provide continuity of service in the event of disasters or network failures. Nortel's geographic redundancy implementation enables networks to 'self-heal' in the event that the main call server is isolated from the rest of the network — allowing users to stay connected and business operations to continue.

## Branch survivability

Connectivity between remote sites and their network can be impacted without warning. To minimize exposure in the event of these unforeseen circumstances, it's critical that offices be able to support their telephony infrastructure in isolation. Nortel offers a suite of survivable branch office solutions to address the needs and requirements of branch offices from small to large.

## Voice quality management

Equipment reliability doesn't mean a thing if the network can't provide high-quality service. Communication Server 1000 supports real-time monitoring and reporting of network conditions during calls — enabling quicker resolution to network problems and ensuring continued high-quality service.

## Nortel Communication Server 1000 highlights

- **IP PBX functionality delivered over IP LAN and WAN infrastructures delivers a comprehensive suite of rich features and applications**
- **Support for TDM and IP clients on one platform provides a smooth migration path to IP at your own pace**
- **Scalability to meet growing enterprise requirements: 22,500 IP clients per call server; multiple call servers networked to support hundreds of thousands of users**
- **Inherent reliability and multiple resiliency mechanisms that ensure business continuity during a network or system failure**
- **Integration with best-in-class unified communications solutions through alliances with market-leading desktop application providers such as Microsoft and IBM**
- **Extensive client portfolio, including IP phones, soft clients, wireless handsets as well as digital and analog phones to meet a diverse set of customer needs**
- **Integration with advanced business-critical applications, including Nortel Contact Center, Nortel CallPilot unified messaging and Nortel Multimedia Communication Server 5100 which delivers unified communications through rich media services**

Nortel's exclusive Proactive Voice Quality Management (PVQM) enables network managers to ensure the overall quality of their IP Telephony deployments. PVQM continuously and passively measures the user quality of experience (QoE) for IP Telephony communications, conducts system health checks for IP Telephony servers, and provides troubleshooting and resolution for any performance degradation or fault conditions to ensure the quality of VoIP communications.

## Security

Increased user mobility combined with growing threats from legitimate and illegitimate users and devices represent a daunting challenge for companies who are trying to secure their network. Nortel has a comprehensive layered defense approach that ensures the integrity and security of the network and its users. This offers numerous security capabilities that include firewall

protection to secure against denial of service (DoS) attacks. The Communication Server 1000 supports a number of capabilities to ensure the security of its users, including the encryption of media and signaling traffic.

## Location-based emergency services

Communication Server 1000 employs intelligent emergency services globally (e.g. 911, 999, 112) that track the location of IP clients and direct calls to the appropriate emergency contact — even if that client is halfway around the world.

## IP Phones and Clients

Communication Server 1000 supports one of the most extensive portfolios of IP clients and devices in the industry — allowing customers to choose the right mix of devices that best supports their business, user and mobility requirements:

- IP Phones for desktops include the award-winning Nortel IP Phone 1100 series and the value-oriented Nortel IP Phone 1200 series. Each series includes models tailored to specific customer environments, budget and/or requirements.
- Mobile handsets including the Nortel WLAN Handset 6100 series and the Integrated DECT Handset 4000 series for on-site mobility using enterprise-deployed wireless technologies. Handset choices span modern sleek designs through to specialized and rugged models designed to endure in harsh environments.
- Soft client options include the Nortel IP Softphone 2050 for Windows PCs and PDAs, the MCS client supporting unified communications and the Nortel Mobile Communications Client 3100 for mobile smart phones.
- Any cell phone can also be enhanced with Communication Server 1000 features by using the Mobile Extension feature to pair it with the user's office phone.

Collectively, the client portfolio provides ideal solutions for all types of users including office workers, contact center agents, remote workers, road warriors or campus mobile workers — delivering more effective employee communications and improved customer responsiveness. The tight integration of IP clients with the Communication Server 1000 system delivers streamlined management and provisioning for site administrators.

### Business-enhancing telephony and unified communications

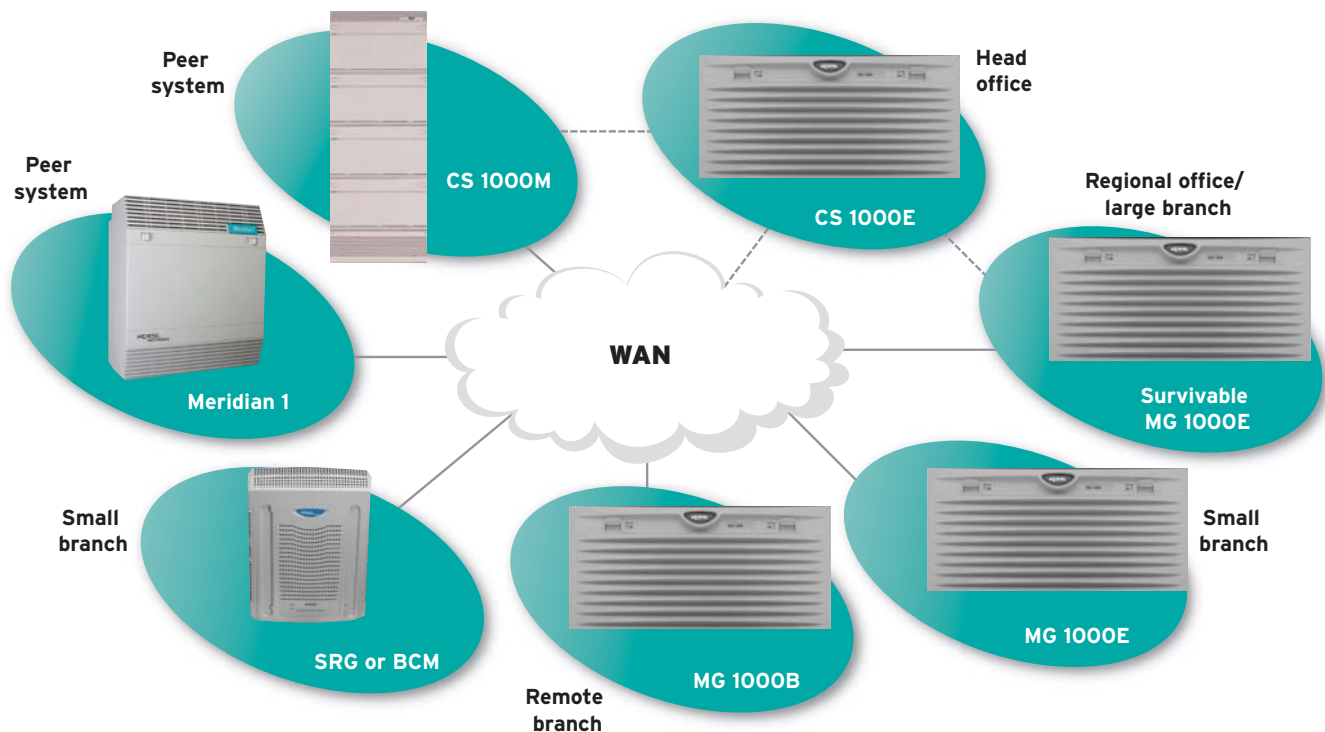
Communication Server 1000 leverages advances in technology, such as Session Initiation Protocol (SIP), to provide users the flexibility to choose the type of media or device they need to communicate most effectively. SIP, a powerful protocol for IP Telephony, supports a wide range of media sessions allowing users to engage in real-time, integrated business communications regardless of location, media type or device.

Communication Server 1000 users all have equal access to productivity-enhancing applications such as Nortel CallPilot unified messaging, Nortel Contact Center, Interactive Voice Response (IVR) and rich media services from Nortel's Multimedia Communication Server 5100. Together, Multimedia Communication Server 5100 and Communication Server 1000 deliver presence-aware, multimedia collaborative sessions that enable employees to improve their productivity, stay connected and be actively engaged.

### Investment protection and freedom to evolve

As enterprises face increasingly tighter capital and IT budgets, replacement of old equipment with new isn't a strategy that will resonate with most CFOs. Nortel's investment protection philosophy ensures that when an enterprise is ready to implement the latest technology, they can upgrade with minimal to no disruption — enabling users to remain productive and engaged with customers and colleagues regardless of time or distance.

**Figure 1. Example of network deployment scenarios**



## Partnering to deliver unified communications

To deliver on the promise of unified communications, Nortel is working closely with leading desktop vendors such as Microsoft and IBM to deliver integrated telephony across the entire enterprise.

Nortel and Microsoft have formed the industry-unique Innovative Communications Alliance to accelerate the transformation of today's voice, video and data communications components into advanced unified communications solutions. As part of this alliance, Nortel and Microsoft have integrated Communication Server 1000 with Microsoft Office Communications

Server 2007 (OCS) and other Microsoft unified communications offerings to provide a complete unified communications experience that offers one user experience, one architecture, all deployment options, and the highest scalability and reliability.

The Nortel and IBM® alliance extends Nortel's rich telephony capabilities to Lotus® Notes® and Sametime® users, through the integration with Nortel Communication Server 1000 and Nortel Multimedia Communication Server 5100. Additionally, through Nortel's Developer Program, Nortel works with innovative partners to accelerate the deployment of enhanced next-generation solutions.

## Conclusion

Nortel, together with its partners, is delivering unified communications solutions that allow users to experience enhanced communications while leveraging their existing investments in Nortel telephony. Communication Server 1000, Nortel's cornerstone IP Telephony solution, is helping to deliver the unified communications experience by enabling enterprises to maximize each interaction, reinforce each relationship and deliver innovative new services.