



Solution Brief

High availability secure multimedia for business continuity

Executive summary

Today's businesses and government agencies require continuous operation of their critical applications including their newly deployed multimedia and collaboration systems. To increase the availability and security of these applications, enhancing the business continuity abilities of our customers, Nortel has built and tested high availability solutions involving Multimedia Communication Server (MCS) 5100, Communication Server 1000 (CS 1000), Nortel Application Switch (NAS), Nortel Switched Firewall (NSF) and Secure Multimedia Controller (SMC). This solution provides strengthened availability, superior security and effortless resiliency for companies with voice, data and multimedia applications that connect businesses, people and information.

Solution overview

Using real-time collaboration technologies such as voice, video, instant messaging, collaboration and presence awareness featured in the MCS 5100 helps enhance productivity and improve business efficiencies while sharing documents, applications and other information immediately with business co-workers, contacts, customers and suppliers.

Since the Nortel Application Switch enables secure, resilient server load

balancing and intelligent traffic management, businesses gain substantially when deploying the Application Switches along with the multimedia applications. This solution simplifies the process of optimizing application performance and reliability, leveraging the switch's application acceleration. In addition, the Secure Multimedia Controller creates a secure multimedia zone, protecting multimedia and voice application servers such as the CS 1000 and MCS 5100, providing a secure encrypted channel



that assures privacy, identity and integrity of communications. As part of a layered defense, Nortel's Switched Firewall provides high performance firewall capability to the Internet and untrusted domains.

Challenge

Constantly improving business efficiency and productivity are critical for businesses to stay competitive. Thus, real-time solutions for collaboration such as Instant Messaging with presence, voice, video and multimedia are in high demand. At the same time, there is an essential need to secure these applications while increasing availability and performance of Voice over Internet

Protocol (VoIP). Enterprise networks deploying real-time VoIP and SIP applications face a variety of security threats at different networking layers, as well as from different areas of trust within the network. While providing the right level of security, IT managers need to ensure the availability of those applications even in the event of a full site failure. For example, voice calls should be able to recover quickly when a multimedia server failure occurs.

Solution

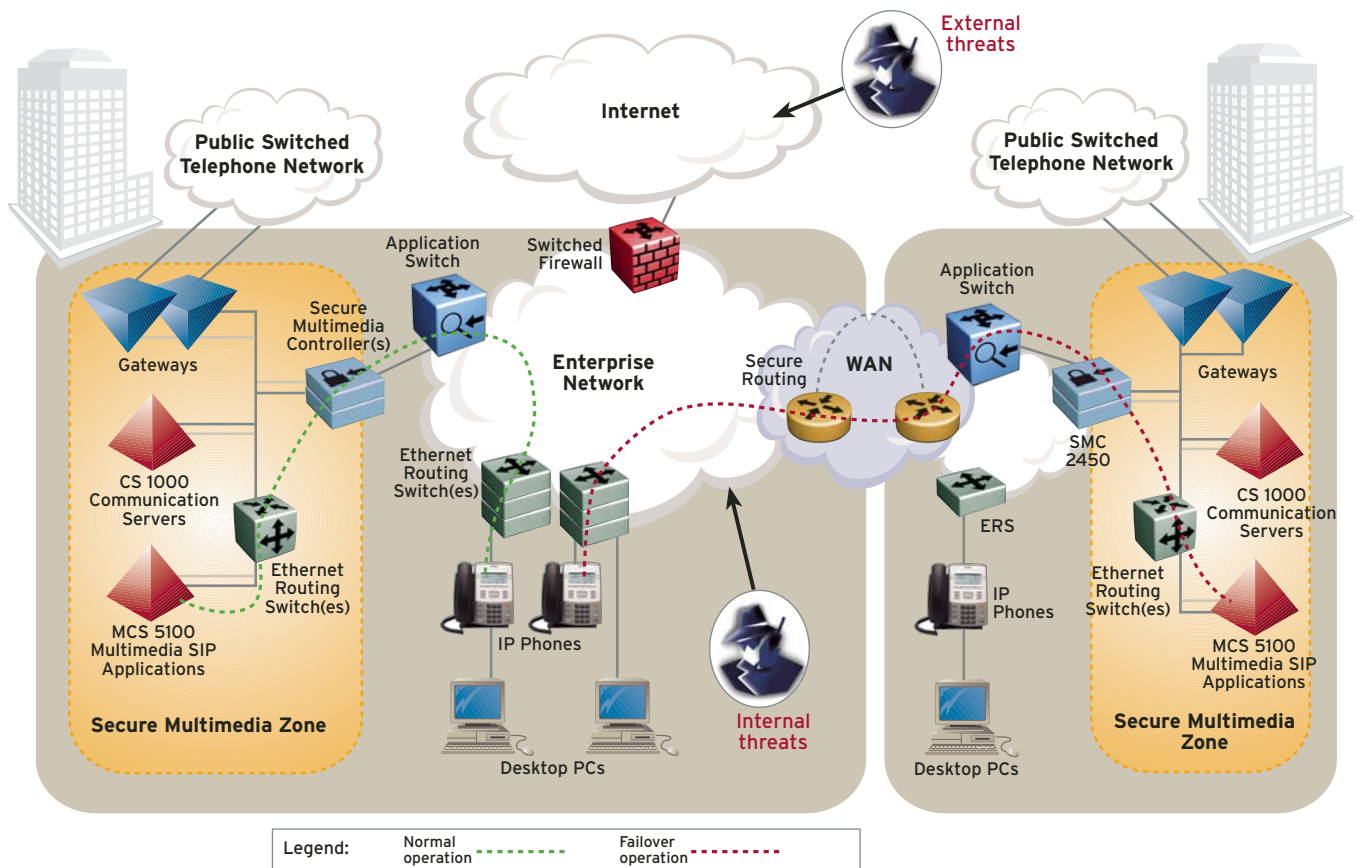
Nortel's Application Switch, Secure Multimedia Controller and Switched Firewall can be used as part of an MCS 5100 and CS 1000 environment in

order to improve multimedia application availability and security as well as enable application control. This solution provides the following:

- › Increased application performance and security
- › Disaster recovery for multiple sites
- › Reduced costs by conserving bandwidth
- › Enhanced application and network efficiency
- › Restriction or blocking of unintended traffic (P2P, DoS, virus, etc.)

The diagram below details a validated solution that delivers the highly-available and secure multimedia applications across the network.

Figure 1. High availability solution for secure multimedia



Solution products and capabilities

Switched Firewall

- › Switch-based acceleration with minimal latency for jitter-sensitive applications
- › Layered defense security
- › Superior scalability and manageability
- › Proven HA (High-Availability) capability

Application Switch

- › Local and Global Server Load Balancing
- › Blocking of DoS attack traffic
- › SIP proxy load balancing

Secure Multimedia Controller

- › Provide mutual endpoint and server authentication
- › Signaling encryption — protecting signaling integrity and preventing interception
- › Signaling authentication
- › Pre-programmed firewall with stateful inspection of VoIP protocols

Communication Server 1000

- › Up to 15,000 IP users per system
- › Advanced IP Telephones
- › Geographic and campus redundancy, rock-solid reliability
- › Hundreds of telephone features
- › Support for open-standards (SIP, H.323) — large library of applications, such as call center and unified messaging

Multimedia Communication Server 5100

- › Up to 10,000 users per system
- › Enabling the virtual enterprise
- › Making users more productive
- › Provide multimedia and collaborative applications that enhance communications
- › Supports video calling, instant messaging, chat, directories, in/out logs, file sharing, web push, co-browse, personal agent, call screening, IM and call routing

This solution simplifies the process of optimizing application performance and reliability and enhances application and switch acceleration leverage.



Benefits

Application resiliency — Delivering resilient VoIP applications is one of many capabilities of the Nortel Application Switch, with features such as SIP proxy load balancing, SIP Refer Method support and SIP Health Checks. This allows the enhanced uptime as well as increased accessibility and ease of use, reducing business operating costs. Nortel Application Switch also has High-Availability features that ensure easy application failover and continuous uptime for customers.

Enhanced security — Nortel's Application Switch, Secure Multimedia Controller and Nortel Switched Firewall provide features such as expanded DoS attack protection and authentication services. Deep packet inspection on the application switches ensures application-aware security.

Simplicity and scalability — Nortel's Application Switch, Secure Multimedia Controller and Switched Firewall are proven technology that are used to secure voice, multimedia and data in many enterprise customer networks, providing a solution that is easy to scale as the business expands.

Conclusion

Nortel has a proven solution that provides both the security and high availability required by the environment in which many of today's organizations operate. Nortel's High Availability Secure Multimedia solution protects the network from internal and external threats and significantly increases the reliability of communication services that act as the lifeblood of modern organizations. This solution accomplishes all of these enhancements while leveraging the latest technologies to continue to lower cost of ownership when compared with traditional approaches. In spite of the extensive and strict enforcement controls, the enhanced resiliency and security features remain largely transparent to users, minimizing confusion and complexity at the user desktop.

Technical information

Technical configuration guides with additional details, along with other useful information, are available on www.nortel.com/enterprisesecurity.

In the United States:

Nortel
35 Davis Drive
Research Triangle Park, NC 27709 USA

In Canada:

Nortel
8200 Dixie Road, Suite 100
Brampton, Ontario L6T 5P6 Canada

In Caribbean and Latin America:

Nortel
1500 Concorde Terrace
Sunrise, FL 33323 USA

In Europe:

Nortel
Maidenhead Office Park, Westacott Way
Maidenhead Berkshire SL6 3QH UK
Phone: 00800 8008 9009 or
+44 (0) 870-907-9009

In Asia Pacific:

Nortel
Nortel Networks Centre
1 Innovation Drive
Macquarie University Research Park
Macquarie Park, NSW 2109
Australia
Tel +61 2 8870 5000

In Greater China:

Nortel
Sun Dong An Plaza
138 Wang Fu Jing Street
Beijing 10000
China
Phone: (86) 10 6510 8000

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.

Nortel, the Nortel logo and the Globemark are trademarks of Nortel Networks. All other trademarks are the property of their owners.

Copyright © 2006 Nortel Networks. All rights reserved. Information in this document is subject to change without notice. Nortel assumes no responsibility for any errors that may appear in this document.

