



Product Brief

Nortel Networks

Voice over IP Solutions

Succession Communication Server 2000

At the heart of the next-generation packet network lies the communication server, managing calls, controlling access and trunking gateways, delivering services, and functioning as the centerpiece of an open, standards-based network.

The Succession* Communication Server 2000 delivers all of these capabilities on a proven carrier-grade platform that provides the comprehensive services, quality, availability, and resiliency carriers and subscribers have always demanded from their networks.

The Succession Communication Server 2000 is a *Superclass* softswitch, delivering market-differentiating local, long distance, and tandem services, while functioning as the intelligent core of a simplified, multiservice network that reduces both capital and operating expenses. And, most critically, it enables service providers to gracefully and economically manage the transformation from circuit to packet networks while protecting and extending their current investments.

In the highly competitive communications industry, service providers transitioning to packet networks need a softswitch platform that leverages their current investments, provides the full Class 5 and Class 4 feature set, and addresses critical regulatory requirements, such as Lawful Intercept and Emergency services.

The Nortel Networks Succession Communication Server 2000—a *Superclass* softswitch—provides all this and delivers the differentiating service set needed in today's market to attract new subscribers. Supporting regulatory, local, long distance, and tandem services on a single platform, the Succession Communication Server 2000 is the ideal platform for transitioning to packet.

NORTEL
NETWORKS™

Maintain and build revenue-generating opportunities

Whether you plan to build new or transition your existing equipment, the Succession Communication Server 2000 delivers a flexible, high-performance network. Supporting a world-class feature set, the Succession Communication Server 2000 enables service providers to maintain their existing revenue stream while migrating to packet.

Flexible software options, including Succession Centrex/Centrex IP, Succession Primary Voice, and Succession Voice over IP Virtual Private Network (VPN), enable you to tailor your service portfolio to specific end-user market segments:

Succession Centrex/Centrex IP

Succession Centrex/Centrex IP provides cost-effective Voice over IP (VoIP) services for large and small businesses. Enterprise employees can access 200+ voice services, either through the Enterprise LAN or remotely via the Internet.

Succession Primary Voice

Succession Primary Voice supports a full range of CLASS services, offering revenue-generating opportunities and full regulatory compliance. Ideal for existing service providers and new market entry, Succession Primary Voice delivers a packet-enabled, feature-rich offering that presents a significant competitive advantage.

Succession Voice over IP Virtual Private Network (VPN)

Making these services available across your entire enterprise, Succession Voice over IP VPN (Virtual Private Network) delivers revenue-generating opportunities, carrier-hosted voice networking, and cost-effective converged access for traditional PBX and H.323 multi-vendor IP PBX networks. Succession Voice over IP VPN service also brings headquarters, branch offices, remote sites, and even telecommuters together onto a single dial plan and simplifies service management.

In addition, you can also deploy the Nortel Networks Multimedia Communication Server 5200 alongside the Succession Communication Server 2000 to enable SIP-based enhanced services that will allow you to differentiate your service offering with multimedia and productivity-enhancing services such as Multimedia Business Services, Broadband Multimedia Services, and Personal Communication Services. These services open a new world of revenue possibilities and provide a sustained competitive advantage.

Long Distance solutions

With the Succession Communication Server 2000 at the center of your packet-based long distance solution, today's investments become part of your next-generation network. And, you benefit from our extensive set of trunk-based services, such as routing, translations, Primary Rate Interface (PRI), and equal access.

By moving to packet, you immediately gain the operational benefits of packet-based networking—including simplified trunk engineering, node reduction, and equipment elimination.

Local solutions

In addition to its trunking advantages, the Succession Communication Server 2000 enables you to take a giant step in converting your current access investment to packet.

This investment will allow you to address new markets with new packet access solutions such as IP phones and cable access, while bringing forward our market-leading portfolio of line-side services that drive today's revenue streams. In addition, the current installed base of TDM packet access devices—such as GR-303 and V5.2 remotes—continues to be supported.

Simplified service delivery

The Succession Communication Server 2000 provides flexible, distributed call and service control across a packet network over an IP or ATM backbone. Carriers can evolve their infrastructure gradually from multiple, single-service overlay networks to a single multiservice network that delivers integrated voice and data services.

This simplified, packetized architecture provides two key benefits:

- Reductions in capital, operating, engineering, and planning costs spring directly from increased network and bandwidth efficiency.
- The network's multiservice capability—including the ability to integrate advanced multimedia services using the Multimedia Communication Server 5200—holds the key to customer retention and fast, cost-efficient growth in both local and extended serving areas.

The Multimedia Communication Server 5200 is highly integrated with the Succession Communication Server 2000, enabling you to differentiate your service offering with multimedia and productivity-enhancing services such as Multimedia Business Services, Broadband Multimedia Services, and Personal Communication Services. These services open a new world of revenue possibilities and provide a foundation for a sustained competitive advantage.

The Succession Communication Server 2000 delivers a rich suite of world-class DMS features, including Succession Primary Voice, Succession Centrex/Centrex IP, and Succession Voice over IP VPN services. These services can help pay for your network build-out and can finance your future growth.

Seamless network transformation

The Succession Communication Server 2000 performs all call control processing functions for your network, including translations, routing, SS7 (Signaling System 7) signaling, and centralized service delivery. A single Succession Communication Server 2000 can make next-generation services available to multiple markets for rapid service delivery and greater market reach.

Up-front investment expenses are also limited by allowing cost-effective upgrades of existing XA-Core-based DMS switches to full-featured softswitches.

Multivendor compatible

The Succession Communication Server 2000 adheres to industry-standard protocols, such as H.248, H.323, Media Gateway Control Protocol (MGCP),

Network-based Call Signaling (NCS), Session Initiation Protocol (SIP), and Bearer Independent Call Control (BICC) interfaces. Our standards-based architecture promotes compatibility with standards-compliant packet-switching equipment, TDM circuit-switched facilities, operations support systems (OSSs), and billing operations. You leverage the best of your current investments, minimize deployment risks, and position your network for new, revenue-generating service opportunities, while making a smooth transition to packet networking.

Carrier-grade reliability

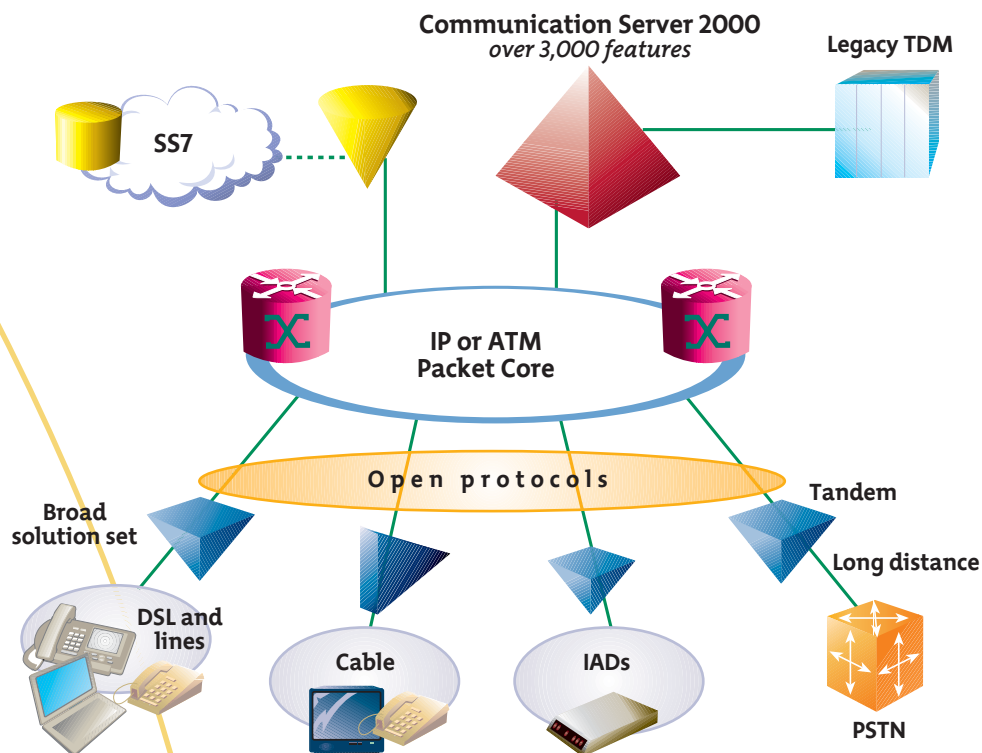
The Succession Communication Server 2000 delivers the ubiquity, quality, and reliability of a traditional TDM telephony network on a next-generation packet network. Built on proven, industry-leading software, it is both carrier-grade and fault-tolerant, with the system robustness associated with DMS SuperNode and XA-Core.

With full 99.999 percent reliability, the Succession Communication Server 2000 enables highly reliable solutions over either an IP or ATM backbone.

Scalable and modular

The Succession Communication Server 2000 distributes call processing and system overhead functions across multiple independent processors. Its modular design enables you to add capacity seamlessly by simply adding circuit packs. Scalable up to 2.0 million Busy Hour Call Attempts (BHCA), the Succession Communication Server 2000 delivers the capacity needed to support end-office collapse and network optimization.

Figure 1. The Succession Communication Server 2000 is a "Superclass" softswitch delivering market-differentiating local, long distance, and tandem services.



Specifications at a glance

Capacity

Capacity for each Succession Communication Server 2000, across all gateways, will reach:

- Up to 250,000 lines
- Up to 165,000 trunk channels (DS-0s)

Actual capacity is also determined by call processing. The Succession Communication Server 2000 will process up to 2 million BHCA (derived from North American Tandem call model).

Backbone interface

- Redundant 100BaseT Ethernet
- Redundant OC-3/STM-1

Trunk gateway control protocols

- H.248
- H.323
- MGCP
- NCS

Softswitch intercommunication protocols

- SIP and SIP-T
- BICC

Softswitch regulatory compliance

International standards

- European Union-ready CE Mark
- ETS 300 019
- AN/NZS-3548 1995, Class A AS/NZS-3260

North American standards

- FCC part 15, Class A
- UL 1950 / CSA 950
- Telcordia NEBS Level 3 criteria (GR-63-CORE, GR-1089-CORE)

Cable media standards

Achieved PacketCable 1.0 qualification based on the following specifications:

- Network-Based Call Signaling Protocol Specification (NCS) PKT-SP-EC-MGCP-I04-011221
- Dynamic Quality-of-Service Specification (DQoS) PKT-SP-DQOS-I03-020116
- Security Specification PKT-SP-SEC-I05-020116

Management

Features point-and-click GUIs with fault-tolerant Succession-enabled solutions. This suite of Telecommunications Management Network-based (TMN) solutions complies with Telcordia GR-2869, ITU M.3010, and others, providing full FCAPS functionality and more.

In the United States:

Nortel Networks
35 Davis Drive
Research Triangle Park, NC 27709
USA

In Canada:

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

In Caribbean and Latin America:

Nortel Networks
1500 Concorde Terrace
Sunrise, FL 33323
USA

In Europe:

Nortel Networks
Maidenhead Office Park
Westacott Way
Maidenhead Berkshire SL6 3QH
UK

In Asia:

Nortel Networks Asia
6/F Cityplaza 4,
Taikooshing,
12 Taikoo Wan Road,
Hong Kong



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www.nortelnetworks.com

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

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