

Nokia IP VPN Solutions

Nokia 500i



Nokia for Business



Nokia 500i is a carrier-class, high performance gateway that is an integral part of the Nokia IP VPN product family. It is targeted to mobile and broadband operators looking to create robust and scalable remote access VPN services.

People are mobile, and, as a result, the workplace has evolved to support the employee's ability to work outside of the traditional office walls. To maximize productivity and reduce operating costs, workers must access business-critical information, whether they are on-site in an "office of many" or on their mobile phones or laptops as an "office of one."

Nokia IP VPN securely connects users from mobile devices or laptops to fixed resources of business-critical information. Part of the Nokia IP VPN gateway family, Nokia 500i is designed to meet the needs of mobile and broadband operators and service providers. A single 500i gateway can support up to 100,000 remote access users, offers 1.5 Gbps

AES-256 throughput, and flexible expansion options including Gigabit-Ethernet connectivity. Nokia 500i also has diskless support, high MTBF components and NEBS-Compliant chassis for excellent reliability and carrier-class resilience.

Nokia 500i utilizes patent-pending Meta-Hop™ technology to ensure applications are available with reliable and intelligent network connectivity offering low Total Cost of Ownership.

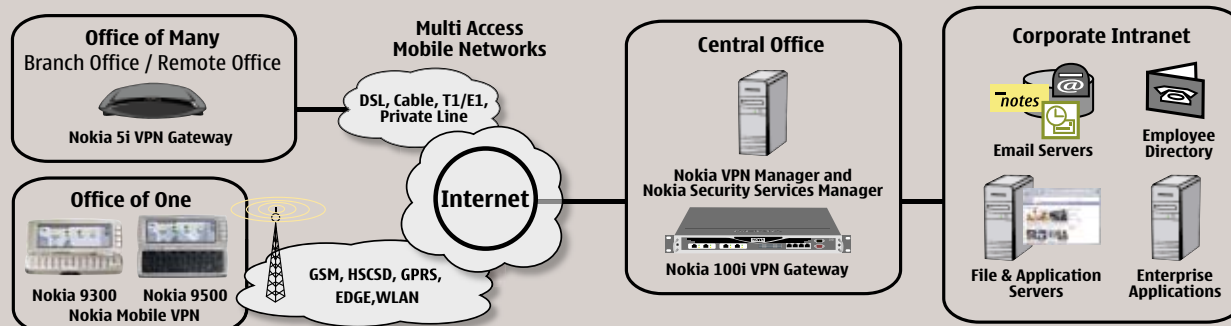
To ensure "always-on" network uptime, Meta-Hop includes adaptive networking technology so administrators can easily grow and modify their network. Nokia 500i is equipped with Nokia's patented IP Clustering to ensure high availability for VPN, firewall and routing. As a result, traffic on the gateway is automatically optimized with Dynamic Load Balancing, Automatic Session Failover and Zero-Downtime Upgrades for maximum uptime.

Finally, Meta-Hop ensures companies can truly be mobile by extending the secure network to mobile devices and Windows laptops. Windows 2000 and XP laptops are supported using the Native Microsoft Windows L2TP/IPSEC client to eliminate the costs and complexities associated with deploying proprietary or 3rd party client software.

Using Nokia VPN Manager and Nokia Security Services Manager, administrators can easily deploy, deliver and update VPN policies for gateways and clients from a central location. When paired with Nokia Security Service Manager policy and configuration updates can be enforced over the air so that mobile workers do not need to come into the office. Nokia 500i also features a full command-line interface, SNMPv3 monitoring and remote logging services.


Best of all, Nokia IP VPN reliability, performance and security are backed by Nokia world-class First Call—Final resolution global support and service.

Nokia IP VPN Solution Overview



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Technical Specifications

Performance and Capacity <ul style="list-style-type: none"> AES-256 SHA-1 (1 node) = 1.5 Gbps AES-256 SHA-1 (2 node) = 1.8 Gbps Stateful Firewall (1 node) = 1.6 Gbps IKE Main Mode Tunnels = 100,000 4 integrated 10/100BaseT interfaces Up to 16 additional 10/100BaseT interfaces Up to 8 additional MMF or 10/100/1000BaseT interfaces 	Policy-based Type of Service <ul style="list-style-type: none"> Differentiated Services (DiffServ) - DiffServ with IPSEC
VPN <ul style="list-style-type: none"> IPSEC (RFC2401 – 12) (RFC2409, RFC2412) Encapsulation Protocols <ul style="list-style-type: none"> - ESP Tunnel and Transport Mode (RFC2406) - AH Tunnel and Transport Mode (RFC2402) Data Encryption <ul style="list-style-type: none"> - AES 128, 192, and 256-bit (RFC3602) - DES 56-bit and 3DES 168-bit (RFC2405) Message Authentication <ul style="list-style-type: none"> - HMAC-SHA-1 (RFC2404) - HMAC-MD5 (RFC2403) Key Management (RFC2409) <ul style="list-style-type: none"> - IKE Main Mode - IKE Quick Mode - Perfect Forward Secrecy Diffie-Hellman Groups 1, 2, 5 (RFC2412, DIFF76) Backup IKE Peer Dead peer detection (RFC 3706) Remote Access <ul style="list-style-type: none"> - IPSEC (RFC3457) - L2TP (RFC2888, 2661) - PPTP (RFC2637) - L2TP within IPSEC (RFC3193) NAT Traversal (RFCs 3947 & 3948) Split Tunneling Network Topologies <ul style="list-style-type: none"> - Hub & Spoke - Full Mesh - Custom 	Meta-Hop and High Availability <ul style="list-style-type: none"> Intelligent VPN <ul style="list-style-type: none"> - Self-Learning - Self-Healing VRRP IP Clustering <ul style="list-style-type: none"> - Dynamic Load Balancing - Active Session Failover - Zero-Downtime Upgrades - Linear Scalability Services: VPN, Routing, Firewall Prioritized External Interface Backup <ul style="list-style-type: none"> - Ethernet (including DSL/Cable) - Dial (including V.92/ISDN) Backup Hub High Reliability Hardware Design <ul style="list-style-type: none"> - Flash-based System
Routing <ul style="list-style-type: none"> BGPv4 (RFC1711) <ul style="list-style-type: none"> - BGPv4 with MD5 (RFC2385) OSPFv2 (RFC2328, STD0054) RIPv1/v2 (RFC2453, STD0056) <ul style="list-style-type: none"> - RIPv2 with MD5 Static Routes Routing over IPSEC 	PKI and Authentication Services <ul style="list-style-type: none"> Nokia AOS Certificate Authority <ul style="list-style-type: none"> - X.509v3 digital certificates - CRLv2 certificate revocation - LDAPv3 certificate storage - PKCS#7, PKCS#10 certificate enrollment - SCEP client Nokia Security Service Manager Enrollment Gateway Password Authentication with CRACK 3rd Party Authentication Services <ul style="list-style-type: none"> - RADIUS - SecurID - LDAPv3 - Microsoft Active Dir - Entrust Authority - Verisign PKI - Baltimore UniCERT - RSA Keon - Microsoft CA - Sun ONE Certificate Server
Addressing <ul style="list-style-type: none"> Network and Port Address Translation (RFC3022, RFC1918) DHCP (RFC2131 – 2, RFC3396, RFC3442) <ul style="list-style-type: none"> - Client - Server Relay with BOOTP forwarding Point-to-Point Protocol (RFC1661 – 2, STD0051) <ul style="list-style-type: none"> - PPP over Ethernet (RFC2561) - Static Address 	Management <ul style="list-style-type: none"> Nokia VPN Manager <ul style="list-style-type: none"> - SSLv3-secured Java GUI - Staging and Over-the-Air Provisioning - Rapid Deployment with Templates - Topology Mgmt with Partitions - Group Mgmt with Realms - Upgrades and Backup with Scheduled Operations - Generate Nokia Mobile VPN Policy Files - Performance Monitor - Platform Req'ts: Microsoft Windows 2000, XP, 2003 Server or Red Hat Enterprise Linux 3.0 - SSHv2-secured AOS CLI SNMPv1/v2/v3 (USM) (RFC3411 – 15, STD0062) <ul style="list-style-type: none"> - MIB-II (RFC1213) - IP MIB (RFC2011) - TCP MIB (RFC2012) - UDP MIB (RFC2013) - Interfaces Group MIB (RFC2863) - IP Forwarding Table MIB (RFC2096) - Host Resources MIB (RFC2667) - Nokia VPN IPSEC MIB - Nokia VPN L2TP/PPTP MIB - Nokia VPN Configuration MIB - Nokia AOS Cluster MIB Syslog Logging NTPv3 Client Out-of-Band Mgmt via Modem Nokia VPN Manager
Clients <ul style="list-style-type: none"> Nokia Mobile VPN Client 3.0 (for Windows 2000, Windows XP and Windows Mobile 2003 Second Edition) Native Microsoft Windows L2TP/IPSEC client support 	Dimensions and Power <ul style="list-style-type: none"> Width – 17" (43.2 cm) Height – 3.46" (8.79 cm) Depth – 21.15" (53.72 cm) Weight – 36 lbs. (16 kg) Power input 100V, 120V, 230V
Firewall <ul style="list-style-type: none"> Stateful Inspection Demilitarized Zone (DMZ) Protocol Support (partial list) <ul style="list-style-type: none"> - HTTP, HTTPS - SMTP, IMAP, POP3 - Telnet, SSH - NetBIOS over TCP - ICMP, SNMP, DNS, NTP Application Gateways <ul style="list-style-type: none"> - FTP - TFTP - RTP (RealAudio/RealVideo) - IRC Chat - Stateful TCP, UDP and ICMP Flows 	Environment / Certification <ul style="list-style-type: none"> Temperature: Temperature 5°C to 40°C Humidity: 10% to 90% (non-condensing) Storage temperature: -20°C to 60°C 

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