

# SafeMove®

## Secure Seamless Mobility

SafeMove is an innovative Mobile VPN software solution that helps organisations to realise the increased profitability and decreased costs achievable through truly mobile business operations. People and devices can be 'instantly' and securely networked, irrespective of place and time.

**Information is the lifeblood of any modern enterprise.** Getting information to employees at the frontline of the business in a timely manner and in the form they need it can help them be far more productive, responsive and profitable. Although individuals can immediately reap the additional flexibility this enables, the organisation will see benefits increase exponentially when large numbers of workers are suitably equipped as mobile technology then has the potential to transform the way business is done; making business processes more efficient (or allowing for new ones), cutting costs, increasing revenues and enhancing customer service and satisfaction.

**Based on Mobile IP, the Internet standard for mobility,** SafeMove enables mobile workers to maintain their connectivity (IP addresses and sessions) whenever and wherever they are attached to the network. SafeMove makes moving in and between networks with a laptop, PDA or Nokia smartphone entirely seamless and transparent. The user has a constant best available connection that does not break even when changing link media, for example Ethernet to WLAN to 3G to GPRS to WiMAX. SafeMove incorporates advanced features to satisfy the scalability and performance needs of mission-critical Internet-based mobility management whilst providing the assured security.

**By maintaining sessions,** SafeMove is able to reliably deliver business critical applications to mobile users, including VoIP and access to shared data services. SafeMove is a key element in delivering a unified communication strategy by providing seamless network connection and session

- Zero-click connectivity
- Session persistence
- Easy deployment
- High-availability and load-balancing
- Support for Windows 7 and Windows Mobile 6.5
- SafeMove Appliance available

persistence. SafeMove also provides the SafeMove Server; a high-performance, scalable solution for the central office. Its integrated management capability enables mobile workers to be supported cost-effectively, reducing down time and allowing true efficiencies to be realised.

**Unlike some mobile VPN solutions** that are based on proprietary technologies, SafeMove is based on open international standards such as IPsec, IKE and Mobile IP. It therefore seamlessly integrates with existing internet based applications and leverages existing technology investments. In addition SafeMove uses encryption libraries accredited with the internationally recognised industry standards FIPS 140-2.

# SafeMove 5.0 Technical specifications

## SUPPORTED PLATFORMS

### Client

Microsoft Windows XP, Microsoft Windows Vista, Microsoft Windows 7, Windows Mobile\*, Nokia Smartphones\*

### Server

SafeMove appliance (see the box on the right), RedHat Enterprise Linux 5, CentOS

## WIRED, WIRELESS, CELLULAR AND SATELLITE NETWORKS

Support for virtually any IP network such as Ethernet, 802.11 a/b/g, GSM data, GPRS, EDGE, UMTS, HSDPA, TETRA, APCO25, CDMA2000, Flash OFDM, INMARSAT and PSTN.

## SUPPORTED AUTHENTICATION STANDARDS

X.509v3 certificate format

PKCS#11 interface for cryptographic tokens

PKCS#12 interface for importing private keys and certificates

ISO7816-4,8 and PKCS#15 smart cards

PC/SC smart card reader interface

CRLv2 certificate revocation lists

LDAP protocol

SCEP (Simple Certificate Enrollment Protocol)

## SECURITY PROTOCOL FRAMEWORK

IPsec/IKE/IKEv2

## IKE

### Authentication methods

Pre-shared secret, RSA signature, DSA signature

### Exchanges

Main, Quick

## IPsec

### Modes

Tunnel, Transport

### Protocols

ESP

### Hash algorithms

MD5, SHA1, SHA256, SHA384, SHA512

### Encryption algorithms

AES, Triple DES

### Special features

IP compression, Path MTU discovery, Dead Peer Detection (DPD), Perfect Forward Secrecy (PFS), Network Address Translation (NAT)

## CRYPTOGRAPHIC LIBRARY

FIPS 140-2 certified \*\*

## NAT TRAVERSAL

NAT Traversal enables smooth mobility between networks behind a network address translation (NAT) gateway. This is needed when visiting networks behind certain firewalls, certain hotspots and GPRS networks.

## SAFEMOVE APPLIANCE SMR300

- Rack-mountable (1U) server
- 4GB RAM
- Quad Core Xeon X3363, 2.83 GHz
- 36 months NBD warranty by default (can be extended to 4h prosupport)
- Can run all SafeMove server components (Mobile IP HA, VPN gateway, Management server)

## SUPPORTED VPN STANDARDS

RFC2407 The Internet IP Security Domain of Interpretation for ISAKMP

RFC2408 Internet Security Association and Key Management Protocol (ISAKMP)

RFC2409 The Internet Key Exchange (IKE)

RFC2412 The OAKLEY Key Determination Protocol

RFC2631 Diffie-Hellman Key Agreement Method

RFC3706 A Traffic-Based Method of Detecting Dead Internet Key Exchange (IKE) Peers

RFC3947 Negotiation of NAT-Traversal in the IKE

RFC3948 UDP Encapsulation of IPsec ESP Packets

RFC4301 Security Architecture for the Internet Protocol

RFC4303 IP Encapsulating Security Payload (ESP)

RFC4306 Internet Key Exchange (IKEv2) Protocol

RFC4307 Cryptographic Algorithms for Use in the Internet Key Exchange Version 2 (IKEv2)

RFC4308 Cryptographic Suites for IPsec

## SUPPORTED MOBILITY STANDARDS

RFC2003 IP Encapsulation within IP (IPIP)

RFC2794 Mobile IP Network Access Identifier Extension for IPv4

RFC3012 Mobile IPv4 Challenge/Response Extensions

RFC3024 Reverse Tunneling for Mobile IP

RFC3115 Mobile IP Vendor/Organization-Specific Extensions

RFC3344 IP Mobility Support

RFC3519 Mobile IP NAT/NAPT Traversal using UDP Tunneling

RFC3543 Registration Revocation in Mobile IPv4

RFC3957 Authentication, Authorization, and Accounting (AAA) Registration Keys for Mobile IPv4

RFC4433 Mobile IPv4 Dynamic Home Agent Assignment

RFC4917 Mobile IPv4 Message String Extension