

TL100

TelliNet V2.6

Tellitec Product Family

— tellitec —

Description

TelliNet is an IP traffic enhancement software solution consisting of a server package combined with a client that can be installed on computers or embedded in third party communication devices.

With its profound and unmatched performance enhancement features TelliNet allows efficient Internet services via satellite and mobile networks. It thereby provides efficient network access to private and corporate users all over the world and therefore targeted at leading service providers, system integrators and telcos.

Today's solutions in the market of telecommunication need to be extremely flexible, reliable, cost and bandwidth efficient. It is well known that satellite is the best method to build-up a communication infrastructure across long distances, especially in areas with less developed terrestrial infrastructure. But satellite communication is often considered as being too expensive for long-term use and is known to have a high latency that dramatically affects the performance of the Internet protocols (TCP and HTTP).

TelliNet seamlessly enhances TCP and HTTP communication and increases end-user satisfaction with high performance mobile and satellite services even in presence of network congestion. At the same time TelliNet includes comprehensive compression and encryption techniques that can be tailored to provide the maximum security and bandwidth efficiency to any application.

Key Features

- Distributed Performance Enhancement Proxy (dPEP)
- Significant application acceleration
- Far exceeds typical (SCPS-TP based) TCP acceleration
- Low bandwidth needed on return channel
- Automated transparent capturing for hassle free installation
- Ideally suited for point-to-point and star topology
- Server redundancy and load sharing for ultimate reliability and scalability
- Authentication, authorization and accounting
- Comprehensive on-the-fly encryption and compression technologies
- Proven reliability, more than 100.000 distributed copies

Main Advantages

- **Reduced Bandwidth Costs.** TelliNet's TCP acceleration mechanisms speed-up IP based data transmission and web-browsing applications and at the same time utilizes the available bandwidth in a more efficient manner – and therefore, helps reduce costs. On top of that, the traffic on both, forward and return channel will be reduced by packet aggregation and several on-the-fly compression techniques.
- **Increased Customer Satisfaction,** thanks to a number of TCP and application acceleration techniques and a hassle-free installation at the end-users premises.
- **Ultimate Security** can be assured by accelerated VPN technologies, strong encryption algorithms and authentication and authorization procedures to ensure strict privacy of any data sent.
- **Service Reliability and Network Scalability** thanks to TelliNet Server redundancy and load sharing mechanisms.
- **Proven Reliability** experienced by leading Telcos, governments and service providers serving more than 100.000 end-users.

Applications

TelliNet is based on standard IP and UDP protocols and therefore be used over a wide range of telecommunication networks supporting IP data communication. This includes unidirectional and bi-directional satellite connections, and any other cable and mobile networks:

- 1-way and 2-way satellite consumer broadband Internet access
- Corporate networks Intranet/Internet connectivity
- Site-to-site virtual private networks (VPN)
- Point-to-point IP trunking services
- Point-to-multipoint IP trunking services
- Interactive DSNG

Related Products

TL150 TelliSpy: Traffic monitoring tool for lawful interception of TelliNet improved networks

TL200 TelliShape: Unique multilevel traffic policing and real time shaping software solution for shared networks

TL300 TelliCast: New dimension of secure and reliable content distribution

TL400 ProVision: Subscriber and service management interface for TelliNet and TelliShape

EL810 Mobile PEP-Box®

Terminal, TelliNet Client embedded

EL820 PEP-Box® Terminal, TelliNet Client embedded

EL830 PEP-Box® Gateway, TelliNet Client embedded

EL840 PEP-Box® Server, TelliNet Server

Related Documents

TL1xx/APN01 Application note on Internet via Satellite

TL1xx/APN02 Application note on Mobile Networks

TL1xx/APN03 Application note on Corporate Virtual Private Networks



— Newtec —

SHAPING THE FUTURE OF SATELLITE COMMUNICATIONS

www.newtec.eu

R3/05.2009

Specifications - TL100

NEW!
With ETCP v2

System Architecture

- distributed PEP (dPEP) architecture (Client and Server component, RFC 3135)
- based on ETCP/ETCPv2 IP tunneling technology (similar to IPsec)
- supports star and point-to-point network topologies
- supports asymmetric routing between TelliNet Client and TelliNet Server, e.g. for setting-up one-way satellite services with terrestrial return channels
- operates in L3 routing mode (in-path or on-a-stick)

TCP Acceleration

- used transport protocol: ETCP/ETCPv2 (Enhanced TCP)
- fills the available link up to the configured maximum throughput
- control traffic reduction through ETCPv2 session multiplexing and combined SACK/ACK technology (compared to SCPS-TP average bandwidth utilization savings: to 98 % of volume and packets on return channel*)
- configurable ACK frequency
- packet loss and delay based 3-tier congestion control technology
- SYN ACK spoofing for HTTP traffic
- dynamic RTT based window size adaptations
- fast start algorithm
- packet aggregation
- configurable MTU
- tolerates dynamically changing network conditions
- tolerates packet loss, jitter, reordering
- tolerates large data queues

Application Acceleration

- Server-side HTTP pre-fetching with support for embedded HTML, JavaScript and CSS objects pre-fetching
- built-in client side web cache
- SMB (CIFS) read-ahead technology
- POP3 e-mail pre-fetching

Data Compression

- provides on-the-fly TCP payload compression
- average TCP payload compression savings: 25 to 40 %
- based on Deflate compression algorithm (RFC 1951)
- selective compression based on URL extension and/or MIME type
- throughput limits can be set prior or after compressed or uncompressed traffic
- provides on-the-fly RTP (e.g. VoIP), UDP and IP header compression

Security

- based on ETCP/ETCPv2 IP tunneling technology (similar to IPsec)
- on-the-fly Blowfish encryption
- available key length: 56 bits as default; optionally up to 448 bits
- hides original end-point information (IP, port, etc.)
- automatic key negotiating per ETCP/ETCPv2 association according to Diffie-Hellman algorithm (RFC 2631)
- re-keying on basis of Client-to-Server association
- software and hardware key-based TelliNet Client authentication
- supports Aladdin eToken™ PRO security dongle
- supports RADIUS authentication, authorization and accounting

System Interfaces

- transparent interception of traffic
- TelliNet Client-side HTTP proxy interface
- TelliNet Client-side SOCKS4 proxy interface
- protocol independent port forwarding
- supports TelliNet Server-side interaction with caching web proxies

Reliability and Scalability

- built-in software watchdog and CPU-/RAM-usage monitoring
- supports hot redundancy with automatic fail-over
- supports TelliNet Server clustering (also known as load sharing) QoS and bandwidth management
- bi-directional throughput limits on a per TelliNet-Client basis
- traffic prioritization based on TOS/DSCP codes
- TOS/DSCP transparency
- centrally managed QoS and bandwidth settings

Management

- ASCII based configuration files for automated system reconfiguration
- web-based interface for live monitoring
- logging with automatic log file rotation
- supports e-mail based incident notifications
- supports file or RADIUS based accounting

Performance*

- up to 1.000 connected and simultaneous active TelliNet Clients per TelliNet Server
- up to 10.000 connected TelliNet Clients per TelliNet Server
- up to 25.000 accelerated TCP sessions per TelliNet Server
- up to 25 Mbit/s outbound/10 Mbit/s inbound throughput per TelliNet Server
- up to 1.000 connections per second

Supported Platforms and Compatibles**

- Intel x86
- Intel XScale / StrongARM
- MIPS
- PowerPC

Operating Systems**

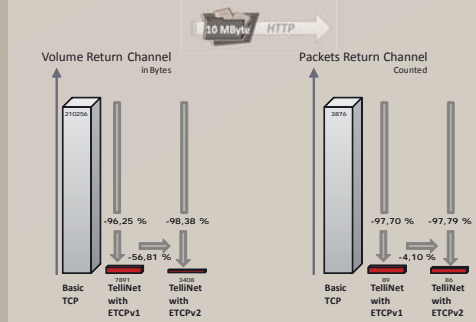
- Linux Kernel 2.4.x - 2.6.x
- Windows 2000, XP, Vista
- Windows 2000/2003 Server
- Mac OS X

Ordering Information**

	Ordering number
TelliNet Server For consumer services, e.g. for Sat3Play, one-way satellite services, GPRS/UMTS	TL-110 LIN TL-110 WIN
TelliNet Server For enterprise services, e.g. for VSAT and DVB-RCS	TL-120 LIN TL-120 WIN
TelliNet Server For IP trunking services	TL-130 LIN
TelliSpy Traffic monitoring tool for lawful interception of TelliNet improved networks	TL-150 LIN
TelliNet Client For consumer services, e.g. for Sat3Play, one-way satellite services, GPRS/UMTS	TL-170 WIN TL-170 LIN TL-170 MAC
TelliNet Client For enterprise services, e.g. for VSAT and DVB-RCS	TL-180 WIN TL-180 LIN TL-180 MAC
TelliNet Client For IP trunking services	TL-190 LIN

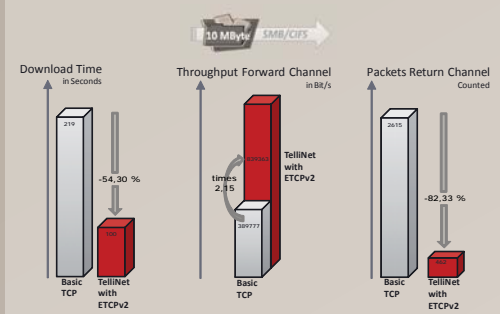
TCP Acceleration on Return Channel

Thanks to the ETCPv2's versatile traffic reduction techniques, applications like IP trunking or VSAT networks can be significantly enhanced. TelliNet reduces especially on return channel the volume and packets on average more than 98 % while downloading a 10 Mbyte file via HTTP.



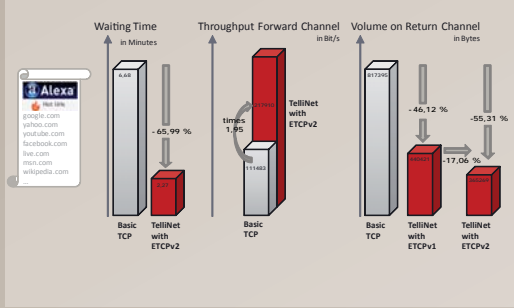
Accelerated Windows File Sharing

TelliNet accelerates Windows File Downloads via SMB/CIFS on average more than 54 % by more than double the throughput on forward channel. The packets sent on return channel is on average less than 82 %.



Web Surfing through "Alexa.com" Pages

TelliNet reduces the aggregated waiting time by more than 65 % while surfing through the top 15 pages listed on "www.alexacom". The average throughput on forward channel is almost doubled compared to basic TCP and the volume on return channel reduced more than half.



Europe
Tel: +32 3 780 65 00
Fax: +32 3 780 65 49

North-America
Tel: +1 203 323-0042
Fax: +1 203 323-8406

South-America
Tel: +55 11 2092 6220
Fax: +55 11 2093 3756

Asia-Pacific
Tel: +65 6777 22 08
Fax: +65 6777 08 87

China
Tel: +86 10-823 18 730
Fax: +86 10-823 18 731

MENA
Tel: +971 4 390 18 78
Fax: +971 4 368 67 68

Africa
Tel: +27 11 640 2745
mbr@newtec.eu

Tellicec and PEP-Box are registered trademarks. All trademarks are properties of their respective holders.

This brochure is provided for information purposes only. The details contained in this document, including product and feature specifications, are subject to change without notice and shall not bind Newtec in any way.