

# High speed Ethernet WAN: Is encryption compromising your network?

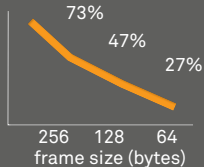


**27%** →

# IPsec encryption facts:

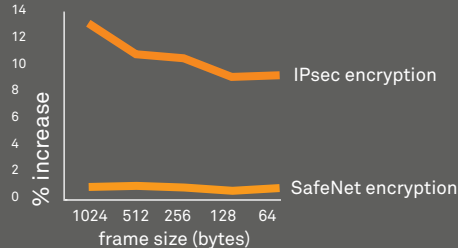
## 27% Throughput

At smaller frame sizes typical of voice and video, IPsec encryption achieves only 27% of maximum theoretical throughput.



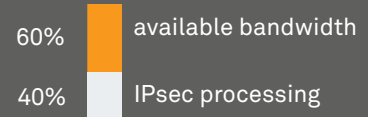
## 13x Latency

IPsec encryption increases latency 6 – 13 times.



## 40% of bandwidth

IPsec encryption can consume up to 40% of available bandwidth.



### Data from Rochester Institute of Technology:

Comparative Performance of Layer 2 and IPsec Encryption on Ethernet Networks

*“Testing exposed the detrimental effect on network performance that is typically imposed by IPsec’s innate processing requirements”*

# SafeNet's Layer 2 network encryption solution delivers:

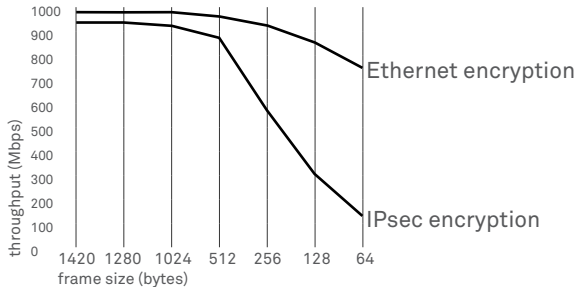
- maximum performance
- strongest available protection
- the least administrative overhead
- the lowest total cost of ownership

Only by unlinking your encryption strategy from your network architecture can you implement a totally secure, full performance, high speed Ethernet WAN.

SafeNet's Network Encryption and Isolation Solution delivers the fastest initial setup, with no need for network reconfiguration, no need for routing table updates, and has no negative impact on network performance or architecture.

# Maximum throughput with zero protocol overhead

## Comparative encrypted throughput data



SafeNet high speed Layer 2 encryption technology introduces zero protocol overhead so that maximum bandwidth is available for data – up to 50% more efficient than competing technologies. SafeNet high speed encryptors provide the fastest network encryption available, operating at true line speed.

SafeNet high speed encryptors have no impact on latency, ensuring the high quality of real-time applications such as VoIP and video – applications with smaller frame sizes. High availability features support architectures with over 99.999% uptime.



## Strongest available protection to AES-256 and tamper-proof to FIPS 140-2 level 3

SafeNet high speed encryptors use the strongest cryptographic algorithms that are publicly available (the Advanced Encryption Standard AES-256), developed by NIST and approved by the NSA for top secret information.

Routers and firewalls are plagued by a constant stream of vulnerabilities and attacks. SafeNet encryptors, operating at Layer 2, do not routinely require security patches.

Physically, SafeNet high speed Ethernet encryptors are a tamper-proof design, certified to FIPS 140-2 level 3, and Common Criteria (ISO/IEC 15408) certified.



## Minimal administrative overhead for low operational expenditure

A big advantage of SafeNet's encryption solution is the low administrative overhead.

Using SafeNet's unique Security Management Center, SafeNet high speed encryptors can be set up in minutes. There's no need for network reconfiguration and no need for routing table updates – routing updates are transparent to encryption.

Because setup and configuration is so easy, less expertise is required. There's no need to manually build complex addressing tables and policies because SafeNet encryptors automatically discover network MAC addresses. When new encryptors are added key discovery is fully automatic.

Because of SafeNet encryptors unique feature offering, SafeNet encryptors overlay seamlessly onto any network topology.

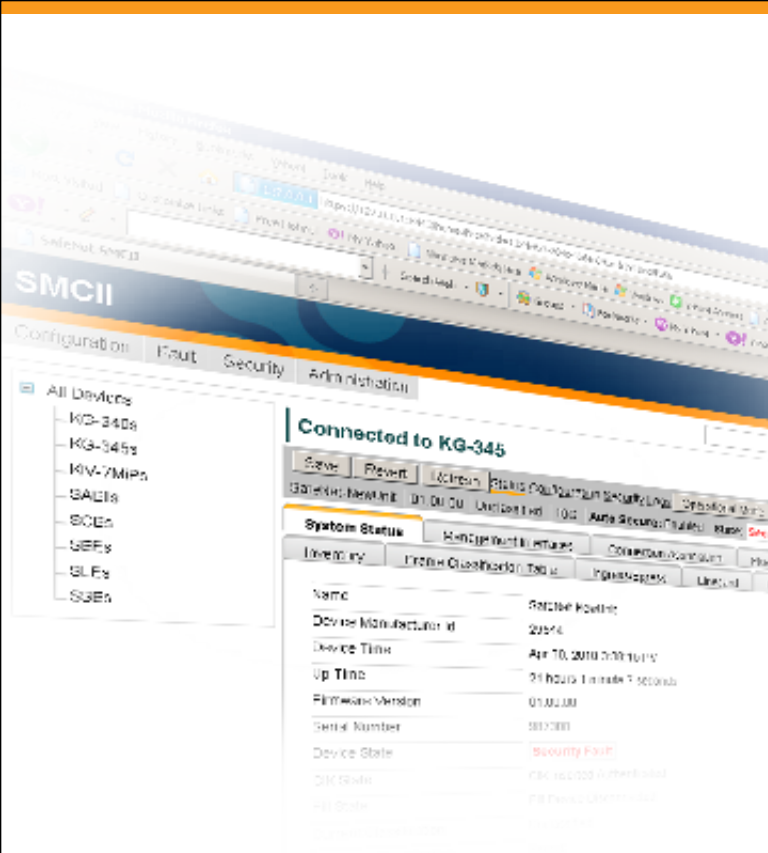


## Lowest capital cost

SafeNet high speed encryptors are the lowest cost solution for aggregation of multiple sites and for high speed networks. Fewer encryptors need to be installed compared to a solution that uses additional routers and IPsec encryption devices.

The simple network topology possible with SafeNet high speed encryptors decreases the complexity of network infrastructure, maintenance and administration, supports all Layer 3 network protocols, and is easily and rapidly scalable to thousands of devices.

And of course, reclaiming your network bandwidth could save you thousands of dollars every month.



## Unified security management

SafeNet's Security Management Center is a unique administration center. Much more than a console, it provides unified management for all your SafeNet data security products, current and future.

Painless remote administration allows you to remotely configure, monitor and update all SafeNet encryptors on a network.

A complete automated data security audit trail reduces audit-related costs.

The Security Management Center's scripting capability automates repetitive tasks to easily configure and administer encryptors, for tasks such as changing passwords, adding users, and renewing certificates.



# SafeNet's Network Encryption and Isolation Solutions

SafeNet's Network Encryption and Isolation Solutions not only simplifies management, it also allows speedy scaling to thousands of devices with auto-device discovery.

Dedicated encryption processing means routers and other network devices are not burdened with encryption – improving overall network ‘headroom’, resilience and performance.

A built-in key leader means no need for external key management, any encryptor can be designated as the key leader for automatically generating keys for the entire encryptor network.

Multipoint support allows one encryptor to connect to hundreds of branch offices.

SafeNet high speed Ethernet encryptors also have built-in VLAN support.

# 85% of inter-bank transfers are carried on SafeNet high speed Ethernet encryptors



SafeNet offers the world's only complete suite of dedicated high speed WAN encryption solutions.

85% of inter-bank transfers are carried on high-speed links encrypted by SafeNet encryptors, and SafeNet devices are used by many US government agencies.

SafeNet is a security company. SafeNet encryptors are designed and built from the ground up as security machines. There is no better option.

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