
# Solution Overview

***"Enterprises often focus on perimeter-based security, but with the growing complexity of environments and applications, firms need to take a broader view. Enterprises need more than perimeter security to ensure full protection of their data."***

**— Forrester Research, March 2005**

Britestream Networks enables enterprises to achieve maximum security and data privacy while maintaining optimum performance.

## Porous Networks: A State of Massive Data Insecurity

We rely heavily on the digital transfer of messages, files, confidential information and even money. But recently, headlines containing phrases like 'Data Privacy Breach,' 'Vulnerable Networks Hacked,' or 'Confidential Information Lost' have become all too common.

The issue of data theft looms larger than ever. According to the Internet Security Threat Report from Symantec Corporation security threats to confidential information are rising. In fact, according to the Federal Trade Commission more than 10 million consumers fall victim to some form of identity theft annually. And businesses are finding that enterprising criminals use the same tactics to steal identities as they formerly used to gain unauthorized access to sensitive and confidential corporate information.

As the complex issues surrounding data privacy continue to grow, the need to share information is also growing at a rapid pace. This need takes place at all levels within an organization, with each having its own unique set of data security challenges. But this need to share information across today's porous networks must be superseded by security measures to ensure data privacy. From ubiquitous mobile devices and supply chain partners to electronic business processes and outsourcing partners, sharing data and securing that data are two mutually exclusive issues that all businesses must address.

Given this increased need to securely move data within organizations and the increased frequency of both malicious internal breaches and external attacks, IT managers must look for new ways to protect the data on their networks.

Networking engineers, security experts and IT departments regularly address security issues, but many corporate networks – including Internet access – remain largely unsecured and porous. IT managers are confronted with a tough balancing act as they address security concerns while also maintaining business continuity, ensuring future scalability, and lowering total cost of ownership.

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## A Key Business Challenge of Today


# Secure Socket Layer, The Industry Standard for Encryption

SSL (Secure Sockets Layer) is the predominant method of securing transactions over the Internet and it is included within all commonly used web browsers. In addition to securing e-commerce transactions, SSL is also the preferred way to transmit sensitive data of any type. The ever-increasing volume of SSL-encrypted traffic presents significant challenges to network architects and systems designers who are tasked with supporting this data in transit while maintaining network and application performance.

Implementing SSL can be difficult and complex. And its pervasive use has been driven by a number of factors, including:

- Data privacy concerns
- National defense initiatives
- Financial regulations
- Compliance initiatives

The complex encryption algorithms of SSL impose a heavy processing load to computing platforms and software. As such, enterprises must oftentimes contend with slow performance, high overhead and networking equipment that wasn't designed to handle high volumes of encrypted information. Cryptographic coprocessors deliver only incremental performance improvements, consume considerable host CPU processing cycles, and don't address other tasks required to completely process SSL traffic. As SSL traffic continues to grow and encryption methods become more advanced, processing the increased load is only going to worsen.

# Software or Hardware? Choosing the Best Method for Data Security

Enterprises have traditionally relied on software-based solutions for security. In a software-based solution, the encryption keys and certificates remain within reach of an experienced hacker who gains access to the underlying operating system.

Of course, the SSL protocol is designed to enable applications to transmit information more securely. But it requires a lot of computational power on the server side. The SSL protocol can be very slow, and cause bottlenecks which may slow applications as much as 10- to 100-fold.

A software-based security solution coupled with an accelerator continues to burden the overall system. Accelerators that offload the security processing from CPUs still require the main processor, memory and the system to help them do their job, so delays are still unavoidable.

In short, software-based solutions are vulnerable to attacks, require continuous updates and patches, and can negatively impact the performance of servers. Meanwhile, constant maintenance to the underlying operating system is always required. Software patches must remain up-to-date to eliminate vulnerabilities, which sometimes can mean repeating the integration with the security software or accelerator card.

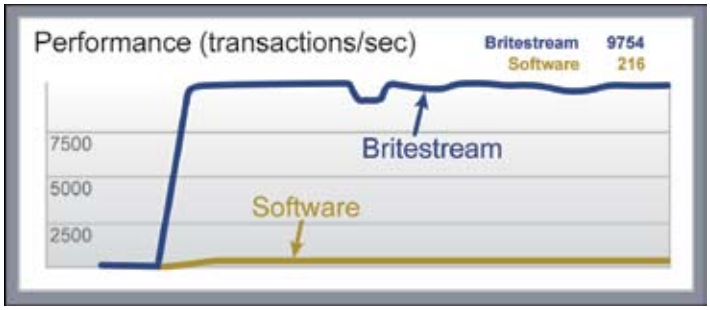
Hardware-based security solutions are becoming the more attractive alternative. In fact, IDC research estimates that 80% of security products will be hardware-based by 2007. Hardware-based solutions offer many advantages. They are more secure, more reliable, provide increased performance and offer additional flexibility. Hardware-based solutions also allow the encryption key to be stored into the tamper-resistant chip. Only authenticated users can then gain access to the key. Network performance is also preserved using a hardware-based security solution. Because the chip actually runs the security applications, the server is free to process other tasks.

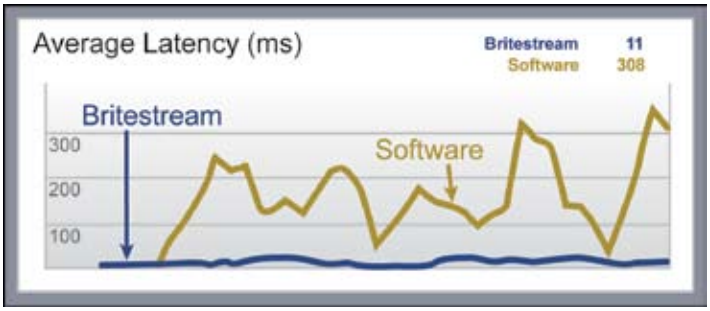
# A Unique Data Privacy Solution from Britestream Networks

Britestream Networks provides a breakthrough solution for the growing challenge of securing data. From securing web applications, e-commerce, Microsoft Exchange and Internet Security and Acceleration (ISA) Server to load balancers, Britestream's SSL Security NIC solutions remove barriers and penalties to deploying – and ensuring – data privacy.

Britestream uniquely provides a solution with distinct advantages. It is the only plug-and-play security Network Interface Card (NIC) based upon the SSL standard. It is also one of a few hardware-based solutions that provide 100% SSL offload to the application server in which it is installed.

The award-winning Britestream technology provides a secure, scalable, and simple solution to processing SSL-encrypted network traffic. Britestream Networks provides a breakthrough solution for the growing data privacy and regulatory compliance.




**Fortified Security**

Hardware-based SSL is far more secure than software-only implementations, which can be vulnerable to corporate identity hijacking, root operating system access, timing attacks, encryption key exposure, and more.

Britestream solutions support advanced encryption while storing private keys and certificates within tamper resistant hardware. It is not dependent upon any potentially vulnerable operating system and does not require regular patching or updates.

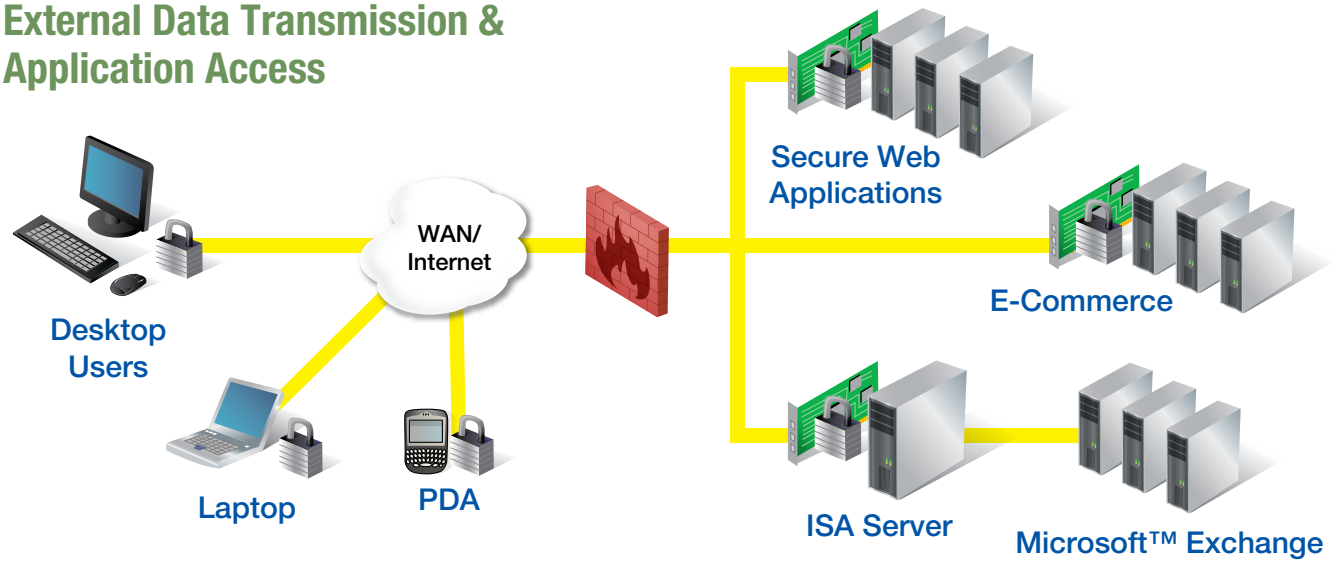
**Performance & Scalability**

100% SSL offload frees valuable CPU cycles to run applications at their full potential and thus lowers the total cost of ownership. Better CPU utilization results in faster application processing, which in turn translates into better response times for user requests. The Britestream solution delivers up to 50 times greater throughput than software-based SSL solutions.

**Plug & Play Simplicity**

Britestream solutions appear to the hosts as a standard PCI NIC, making installation and configuration intuitive and easy. It is both OS and platform independent, allowing for ease of use within all facets of the IT environment.

## External Data Transmission & Application Access



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# Britestream Products

### SSL Security Solutions

Britestream's PCI-based SSL security NICs are a direct plug-in security solution for companies looking to secure new applications or data without impacting their application or network performance.

SSL can often impose a significant penalty on an application. This results in the need to provide more server hardware than necessary just to implement SSL for securing IIS or Apache web transactions or Exchange 2003 access through OWA, RPC over HTTP, OMA or ActiveSync. Given the Britestream NIC design, now SSL can be turned on by default in more server applications for secure transmission of data, both inside and outside the network.

## Key Benefits

- Improves application response time by offloading 100% of SSL processing.
- Enables end-to-end data privacy from the browser or client application to the application server.
- Supports industry security standards SSL and TLS.
- Uses tamper-resistant, hardware-based solution to protect encryption keys and certificates ensuring fortified security.
- Lowers total cost of operations by eliminating the need for additional servers and licensing fees.
- Allows both internal and external data transmissions to be secure by default.
- Supports common operating systems and provides flexible deployment options.

# Who Needs the Britestream Solution?

The Britestream solution is an attractive solution for enterprises or solution providers that have a need for SSL-based data privacy. With ever expanding risks of exposing critical or confidential data, demand for simple, hardware-based solutions is also on the rise. Britestream can help you to stop rationing security and instead protect your data both inside and outside the network.

Contact us at: 512.250.2129 or 888.926.8857 or by email at sales@britestream.com.

## Recognized by the Industry

Britestream Networks' technology has gained the attention for many leading organizations in the industry. Awards and certifications include the following:

2005 DATAMATION PRODUCT OF THE YEAR

Microsoft CERTIFIED Partner

secure!T ALLIANCE

VeriTest Deliver with Confidence

Ready for IBM Tivoli e-business software

BEST OF SHOW AWARD INTEROP

Business Partner hp invent

CERTIFIED covalent ENTERPRISE READY

VeriSign JAPAN



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