



NETWORK PUMP®

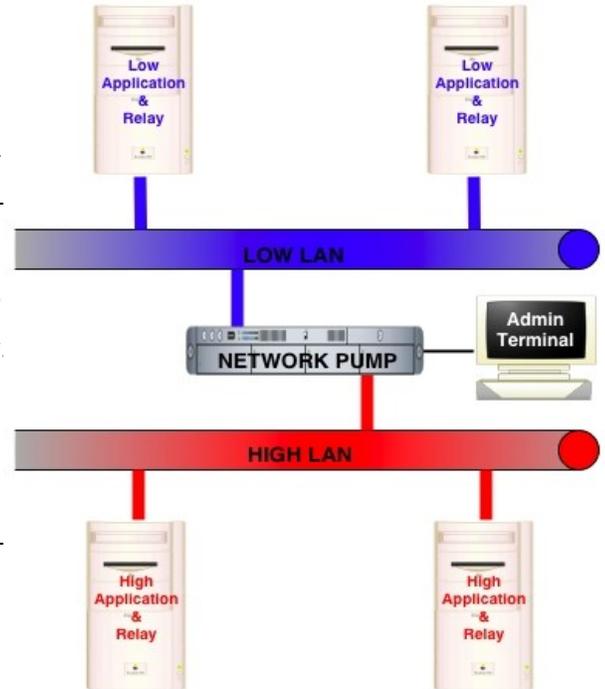
HIGH ASSURANCE "ONE-WAY" GUARD

Key Features:

- Affordable GOTS solution
- Custom hardware security architecture
- Custom Embedded security RTOS
- US Navy type accredited
 - DoD 8500.2 compliant
 - NSA penetration testing completed
- Multiple connection support
- Field upgradable
 - Allows only signed operational Software updates
- Recoverability of data in transit upon power loss
- Dimensions:
 - 17.5"W x 1.75"H x 10.5"D
 - 19" rack mountable 1U case
- RS-232 interface for administrator workstation provides:
 - Configuration support
 - Diagnostic testing
 - Audit/log access
 - Loading of signed software upgrades
- 5 Mbps data throughput

Overview

The Network Pump® is a Government off-the-shelf (GOTS) High Assurance "One-Way" Guard that enables applications operating on a lower security level network to pass information to applications on a high security level network automatically. Developed by the U.S. Naval Research Laboratory (NRL), Center for High Assurance Computer Systems, the "One-Way" Guard delivers information without leakage from the High network to the Low network.



Assured Delivery: As part of this transfer, the application on the Low side receives a meaningful acknowledgement that the information has been delivered to the High network. Most competing "guarding" technology solutions do not provide this type of acknowledgement. The Network Pump® implements a NRL-patented algorithm that statistically modulates the delay of the acknowledgement to mitigate the potential for covert timing channels.

Network Transparent: The Network Pump® works with any operating system on any hardware platform that supports a TCP/IP network. NRL provides the pump protocol used for packaging data for transfer to and from the Network Pump®. In addition, to support specific files types and acknowledgements between systems across the boundaries, relays have been developed to execute the pump protocol for data file transfer.

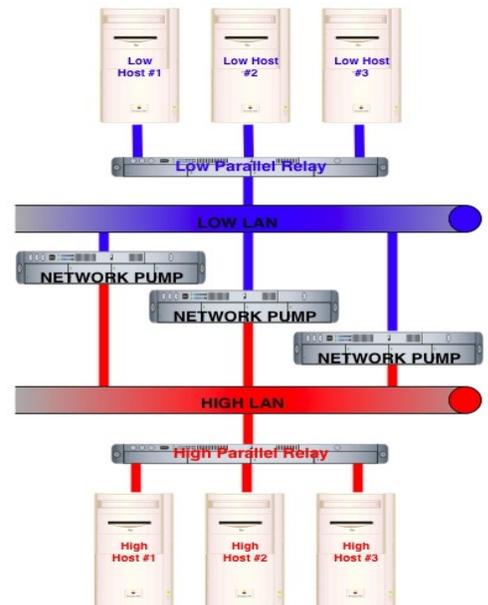


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Parallel Pump Relay Configuration

In environments where the demand for data throughput is higher than 5Mbps, customers can configure multiple pumps to operate in parallel to linearly increase network performance through the use of a NRL-developed software relay. The parallel software relay allows multiple Network Pumps® to behave like a single, logical Network Pump® that reduces configuration complexity.



COMMUNICATIONS SECURITY SECTION

The Communications Security (COMSEC) Systems Section, a component of the Center for High Assurance Computer Systems (CHACS) at the U.S. Naval Research Laboratory, focuses on research and development of guarding technologies.

Current Projects:

- Network Pump® Products
 - Network Pump®
 - Parallel Pump Relay
- Network Pump® II CDS
- XML Filter
- Key Distribution CDS (KD-CDS)
- Trusted Content Filtering Framework (TCFF)
- Secure BIOS Technology

For Additional Information:

U.S. Naval Research Lab
Attn: Code 5541
4555 Overlook Ave, SW
Washington, DC 20375

Fax: (202) 767-1060

Email: 5541info@chacs.nrl.navy.mil