

Trusted Proactive Security

Routing firewalls for operation in security critical environments with high requirements for availability, comprehensive support as well as reliable and trusted systems powered by OpenBSD.

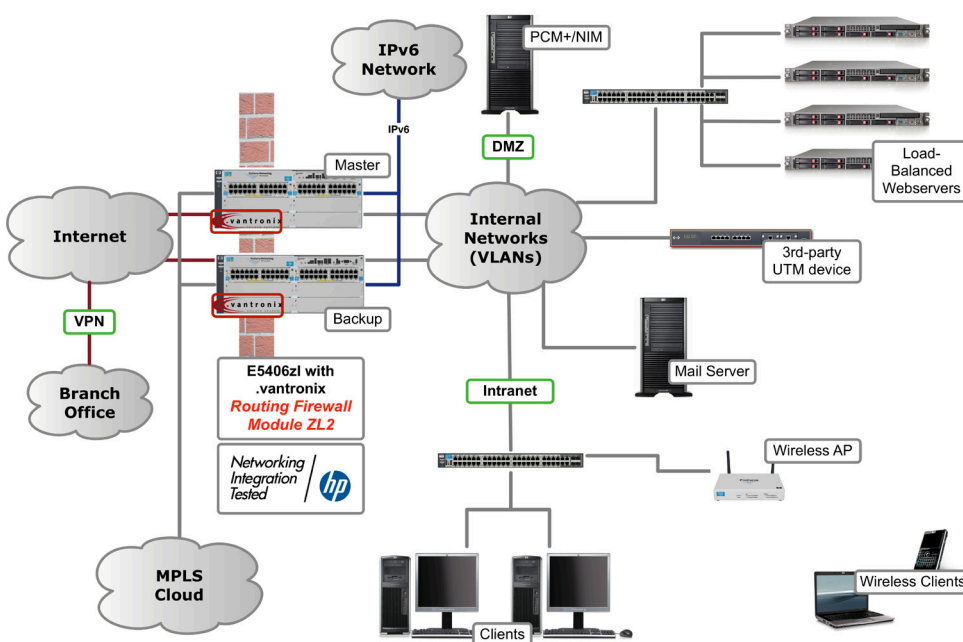
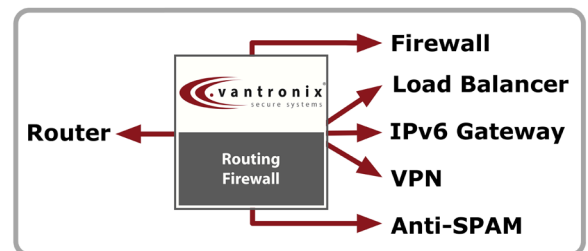
The solution has to provide high availability and redundancy as well as compliance with multi-user and security requirements. Furthermore, a modern firewall is more than just a border security solution between the internet and the internal network - a firewall is an intelligent edge security solution and a powerful router between a number of subnets, VLANs and logical security layers.

Border Security Solution

The first level of defense in networks connected to the Internet is the firewall – a security solution that controls and enforces policies on incoming and outgoing connections. A classical firewall is a mandatory component in every modern network, a key security-component that cannot be replaced by client-based personal firewalls, UTM-solutions, or stateless Access Control Lists (ACLs) on routers.

The requirements for firewalls in enterprise and corporate environments necessitate the stateful inspection of hundreds of thousands of connections based on protocol and options, detect anomalies, and inspect payloads.

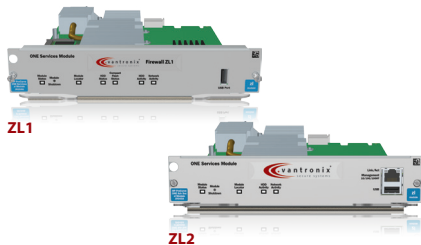
The first level of defense is the routing firewall, the second level is covered by UTM, IDS and IPS solutions and the third level depends on client-based security.



Key challenges

- Provide an enterprise-grade routing firewall solution for customers with sophisticated border security requirements.
- Replace existing competitive firewalls and migrate to a superior solution.
- Allow a better integration, flexibility and security than the previous solution with an increased TCO.
- Provide competent customer support for the hardware and software.
- Routing firewall with BGP, OSPF, PBR, DVMRP, MPLS and more.

.vtFW-ZL / .vtRT-ZL Series



Intelligent EDGE Routing Firewall

Routing Firewalls module for HP E5400/E8200zl switches

The combination of a .vantronix Firewall ZL running in a HP Networking E8200/E5400zl switch on the ONE Services zl Module or the Advanced Services zl Module is a powerful integrated border security solution. The ZL is physically integrated in the HP platform, interoperates with the HP management and software platform and operates as an enterprise-grade .vantronix Routing Firewall.

.vtFW-EM2P



COLO Firewall

The optimal Office and Co-Location Firewall

The .vantronix | Firewall EM2P is the firewall for office-employment and co-locations. It is based on an extremely energy and space saving embedded hardware platform.

With 8x 10/100Tx Fast Ethernet ports it can physically interconnect different networks, like office departments, DMZ for servers and services, application server pools, and the internet uplink.

.vtFW-C1



Network Firewall

The stable and high-quality Firewall

The .vtFW-C1 is a very high-quality firewall powered by HP ProLiant servers. It is even appropriate for permanent heavy-duty use in high-available environments. It is especially equipped for the operation in high-available environments as a protection of application and web servers or completely intern networks. Moreover it is convenient as a load balancer for big intern server pools.

.vtFW-C2



High-Level Network Firewall

The stable and high-quality Firewall for heavy data throughput

The .vtFW-C2, powered by HP ProLiant servers, is the high-level firewall that meets high expectations. Even under heavy-duty use it is suitable as a multifunctional firewall with amazing speed. It is especially equipped for the operation in high-available environments as a protection of application and web servers or completely intern networks.

.vtFW-HA1



High-End Network Firewall System

The highly available and redundant Firewall System

The .vtFW-HA1, powered by a pair of HP ProLiant servers, is the high end firewall that fulfills the highest expectations. Even the basic configuration is a complete redundant system and therefore provides of course "always on" functionality. The integrated RAID in every single firewall also provides the opportunity of local and network independent logging of huge amounts of data.

Firewall

The Packet Filter (PF) is a Stateful Packet Inspection firewall with full support for IPv4 and IPv6, queuing (QoS), translation (various forms of NAT), traffic normalization, DoS-protection, High Availability (HA) and .vantronix preinspection. Its unique tree-based state engine can handle hundreds of thousands of concurrent sessions while delivering high performance. The postinspection option extends the firewall with IDS, Anti-Virus and URL-Filtering with support for HP Network.

Immunity Manager.

- Stateful packet inspection (SPI)
- Highest performance and scalability
- Stateful firewall failover for HA
- Highly flexible software-based solution
- QoS and traffic shaping
- Network address translation (NAT)
- Transparent operation as bridging firewall
- IPv4 and IPv6 support
- (D)DoS attack mitigation
- Powered by the superior OpenBSD pf packet filter

Router

- Up to 1024 Routing Domains
- Millions of routes, e.g. multiple BGP full tables (330K+ routes) per Routing Domain
- IPv4 and IPv6 support
- Multiple network interfaces or VLANs per Routing Domain
- Overlapping or identical IP subnets in multiple independent Routing Domains
- OSPF and BGP integration
- Policy-based Routing (PBR)
- Packet Filtering on multiple Routing Domains
- IPsec VPN on multiple Routing Domains
- Load Balancing across multiple Routing Domains
- DHCP client/server in non-default and multiple Routing Domain
- Extended L2TPv3 support, MPLS Provider Edge and full MPLS support ("VRF")

IPv6 Gateway

.vantronix provides full support for the next generation Internet Protocol version 6. The IPv4-to-IPv6 and IPv6-to-IPv4 gateway extends the proven dual stack functionality with dynamic translation between address families for interconnecting and migrating IPv4 and IPv6 network clouds.

- IPv4-to-IPv6 and IPv6-to-IPv4 gateway
- Attach IPv6 networks to the IPv4 internet
- Connect to the IPv4 internet from IPv6 networks
- Dual Stack and Dynamic Translation of IP address families
- Stateful firewalling and IPv6 security

Load Balancer

The integrated load balancer provides support for multi-protocol layer 2 to layer 7 load balancing, .vantronix | greenbalancing, active health checking of server pools, transparent operation, session persistence, and attack prevention as an integrated subsystem of the .vantronix firewall engine.

- Ethernet-based layer 2 loadbalancing
- IP-based layer 3 loadbalancing
- TCP-based layer 4+ loadbalancing
- Session-based layer 7 loadbalancing
- Active health checking of server pools
- Multiple and optimized loadbalancing algorithms
- Multi-protocol operation and optimization (HTTP, SSL,)
- Session persistence and sticky addressing
- Gigabit performance with thousands of concurrent sessions
- Hardware SSL acceleration
- Firewall interaction and attack prevention
- Validated for PCI-DSS operation
- Linkbalancing with dynamic routing (BGP and OSPF)

Anti-SPAM

The network-based Anti-spam solution is powered by .vantronix' preinspection approach to detect spammers based on their network behavior and SMTP-compliance. Core technologies like fully-transparent greylisting and greytrapping have been extended to meet the requirements of high-volume enterprise email applications.

- Network-based Anti-SPAM solution
- Transparent operation in front of the MTA
- Optimized and proactive greylisting
- Catch spammers with greytrapping
- Optional white/blacklisting
- Powered by .vantronix | preinspection
- Highly efficient and proven
- Realtime synchronization and HA

VPN

Integrated VPN support is a mandatory feature for firewalls in enterprise environments. .vantronix provides strong security and crypto using the industry-standard IPsec protocol, SSH-VPN and the next generation VPN protocol IKEv2.

- High secure IPsec VPN with stateful failover for HA
- ISAKMP / IKEv1 and IKEv2
- Roadwarrior support
- Powerful and easy configuration
- Transparent operation as bridging VPN gateway
- Strong crypto by default
- NAT Traversal (NAT-T)
- Alternative SSH-VPN and SSL-VPN option
- Validated for PCI-DSS operation

Solution Benefits

Pre Inspection

The .vantronix principle is different from conventional UTM and IDS/IPS solutions:

.vantronix | preinspection is an early detection of anomalies and avoids problematic signature-based inspections, with a positive impact on false-negative and false-positives, an increased security and a better overall performance.

Conventional signature-based „Deep Inspection“ systems can cause considerable security problems. A tiny bug in the numerous and heavily complex protocol inspectors may lead to a security hole in the entire system. Security's worst enemy is complexity.

In contrast, **.vantronix | preinspection** detects protocol anomalies instead of data anomalies for early countermeasures against possible attacks. And IDS/IPS systems can additionally be used behind the proactive protection of the .vantronix Security Appliance.

Post Inspection

The integrated application-level filter are used for protocol-specific analysis and defence against abnormal and malicious intrusion attempts.

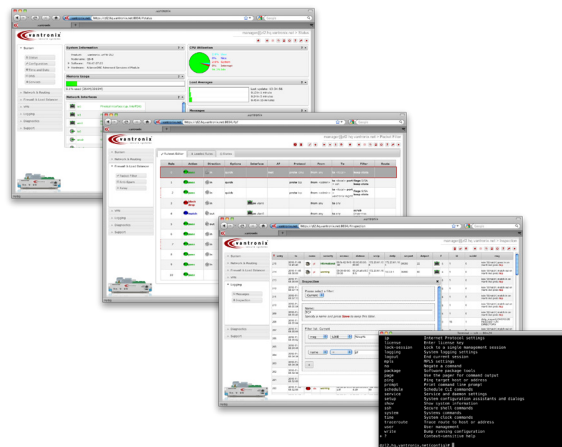
- Use of **.vantronix | preinspection** technologies as a protection against DoS-attacks, mail „SPAM“ and malicious intrusion attempts.
- Integrated optional HTTP proxy with white- and blacklists, to be used as an URL filter or „Wallet Garden“.
- Numerous NAT-helpers to handle problematic internet protocols.
- Intrusion Detection and Prevention (**IDS / IPS**).
- Interoperable with the **ProCurve Network Immunity Manage (NI)**.

Trusted Proactive Security

The .vantronix software platform is based on **OpenBSD**, the high secure Open Source operating system. Only two remote holes in the default install, in more than 10 years.

Deterministic Release Updates

A new stable software release will be released every six months. This provides an optimal and unique planning reliability. There will be security and errata-fixes between releases



Sophisticated Administration

The .vantronix Security Appliances have been designed for professional network administrators, by supporting network management systems (NMS), a unique CLI and access to a POSIX shell.

The modular **.vantronix | amcli** provides a comfort of an industry-standard CLI and the .vantronix | Firewall Manager; a powerfull GUI for configuration, logging and monitoring.

HP AllianceONE Select Partner

.vantronix is a member of Hewlett-packard's WW AllianceONE (Open Networking Ecosystem) which provides you a choice of secure best-in-class solutions from a community of developers, using HP's market-leading open-standards network foundation. AllianceONE offers you the confidence that the solution will be supported while providing application vendor choice through a multi-vendor model.

About .vantronix

.vantronix | secure systems GmbH is a company located in Hannover, Germany, which is a vendor of high-end security appliances for the corporate and enterprise market. .vantronix provides multi-functional network security solutions and firewalls based on a solid, proven and secure platform. .vantronix is an emerging security vendor which is well positioned to reach the global market and its international clients. The company's growing business is supported by competitive products and an expanding network of certified reseller, technical and alliance partners.

