Forefront Appliance Platform

nAppliance appliance platforms are purpose-built, high performance hardware devices and a set of custom-nAppliance designed system management tools which form the foundation of our Microsoft powered "Turn-Key" Forefront edge security system solutions.

Comprehensive, secure remote access to corporate resources

Microsoft Forefront Security Hardened Appliances Platforms built for Network Edge Security Services

Our appliance platforms are designed for organizations that want an integrated leading edge hardware security software service offering from Microsoft on an optimized hardware platform. It offers best-of-breed Microsoft Forefront Edge security service software packaged with nAppliances pre-configured, security hardened and support solution with virtually no maintenance.

nAppliance power of it system and hardware management software provides a complete plug and play solution for Microsoft Forefront Threat Management Gateway (TMG) and Universal Access Gateway (UAG) edge security software suites. Our standard business edition appliances are deployed as a standalone device and enterprise edition appliances can be deployed as a standalone device or high-availability (HA) with network load balancing (NLB) for optimal service resiliency.

Purpose-Built: Scalable family of Network Security Appliance Platforms for business of all sizes

nAppliance offers a wide range of hardware configurations, each of the models are pre-configured with most optimized hardware components and system management tools to meet our customers unique business requirements. Configures are fine tuned to deliver various levels of system performance, capacity, scalability and availability required to meet the requirements of small to large size business, small to large size enterprise and branch offices.

nAppliance running Microsoft Forefront Edge Security systems provide the security and management benefits of special purpose hardware products, and provide the familiar management interfaces of other Microsoft technologies. Security appliances often have special purpose hardware specific to network security. Appliance products running Microsoft Embedded Edge Security technologies have the following unique advantages:

Appliance Advantage: Security Hardened Configuration for "Out-Of-the-Box" Experience

Each security appliance has various software and hardware components installed and integrated. This configuration is then carefully tuned and hardened to maximize the security posture of each system. This hardening is exhaustive, costly and difficult to provide in general IT hardware and only software implementations, but imperative on edge security devices.

nAppliance has the lowest total cost of ownership as compared to traditional software alternatives. The nAppliance appliance-based architecture eliminates many of the costs of traditional systems management including software and hardware procurement, installation, off-site training, and the resources required for ongoing upgrades, system maintenance and technical support. Our appliance advantage offer security hardened configuration for "Out-Of-the-Box" experience.

Product Highlights:

Hardware Platform Advantage: Advance Appliance System Configuration for Maximum Performance

- **Multi-Core 64-bit architecture for high-performance network security:** nAppliance appliance design includes multi-core x86 architecture, high-speed processor cache, larger memory and multi lane PCIe bandwidth, designs for maximized performance, scalability and reduced power consumption. It provides accelerated deep packet inspection and content protection against ever evolving complex attack in real time from both inside and outside the network perimeter.
- **Enterprise grade high availability:** nAppliance appliances take system fault tolerance and failover to new level for core network security service appliances. Our appliances offer:
  - Hardware availability thru components level redundancy of disks, power supply and fans.
  - Windows operating system availability through system image redundancy and online PiT snapshot recovery system.
  - Network level system availability thru network load balancing and fail-over systems.
- **High Copper and Fiber network port density:** The high port-density Gigabit Ethernet interfaces provide the performance and operational flexibility and redundancy required to secure a high-availability network infrastructure, along with economies of scale needed by large, enterprise, data centers, and service providers.
- **Embedded high performance SSL acceleration hardware for 100% TCP/IP Offload:** High performance hardware SSL acceleration co-processor from Cavium helps reduce CPU workload and provides following benefits:
  - Shorter response time delay: The reduction in CPU load results in reduced delay for each of the individual clients.
  - Increased burst rate thru faster SSL handshake: It can support 100's of new concurrent logins per second. It provides significant burst rate performance gain and system stability over software-only solutions.
  - Increased Peak Time Performance: Reduced CPU workload helps increases the number of transaction each of the appliance system can process.
  - Increased Security: Server private keys are stored in write-only flash devices embedded into the Cavium processors as oppose to storing it on hard disk drives, making unauthorized access more difficult.
- **HSM certificate management:** HSM hardware provides a certificate repository and generation facility. Certificates can be compromised if a system is compromised, unless the certificates are generated and stored in these special hardware components.
- **Integrated security audits:** nAppliance appliance systems are built, packaged and receives a complete security audit on completed system by our security system experts. Various software add-ons, hardware components and system configurations will change a system profile; each of configuration is tested and audited for security and reliability on ongoing basis.

nAppliance Forefront Powered Appliance Platform Advantage

Microsoft Forefront Edge Security Software Optimized Platforms

Oneface System Managment Tools / **Oneface**

Oneface Windows System Manager
- Centralized management system.
- Backup Manager, Update Manager, HW Fail-Over Manager, Configuration and Alert Manager
- SNMP based real-time system enviornment and health monitoring

Packaged Microsoft Forefront Edge Security Suite
- Platform Optimization: Pre-installed, pre-tested and certified.
- Security Audit: Pre-hardened security policies
- Microsoft Embedded Windows Server 2008 R2 and Forefront Gateway Security Optimized

Reliable, Non-Stop System Availability
- Enterprise Grade, higher MTBF Parts
- Redundant Disks, Fans and PS
- Redundant OS Image on Disk
- Remote Lights-Out (LOM) based Out-of-Band management
- Flash based Embedded ARRMS technology for bare-metal recovery
- Standalone or HA/NLB configurations

Oneface Embedded Recovery Manager
- nAppliance designed Appliance Recovery and Remote Managment System (ARRMS) technology
- Failure-proof in-field hardware image maintenance services for easy appliance PiT Online Recovery, Backup, Restore and Factory Reset

Scalable, High Performance Hardware
- Multi-Core 64-bit architecture
- Large LAN port density, higher throughput and redundancy
- SSL HW Accelerator, 100% CPU Offload
- HSM Certified HW and Management
- High capacity, Enterprise performance, Redundant SATA and SAS disks

Oneface Embedded LOM Manager
Remote Appliance HW Management
- Lights-Out iKVM (IPMI) support for BIOS level access using standard web browser over internet

Appliance Support, Services and Accountability
- Help Desk Options include Silver, Gold and Platinum 24x7 Support Plans
- Forefront certified expert support via web, email and phone
- Advance Hardware Replacement
- Microsoft Forefront OEM Partnership
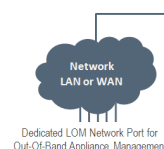- Support service centers in USA, Europe & Asia

Custom-Tailored , Multiple Configurations
- Entery Level: Model -500 provides low cost small business solution
- Business Class: Model-1500 and 2500 provide entry level SMB or small enterprise or branch office solutions
- Enterprise: Model-3500 and 5500 are best suited for large enterprise and branch offices

Oneface Embedded LCD Manager
- Graphical LCD for easy headless deploymnet and field-maintenance

Hardware Platforms / Net-Gateway - Purpose Built Appliance Hardware Platforms

Worldwide Support Coverage - Forefront TMG and UAG Sales, Help Desk and Warranty Services

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LOM Manager: Embedded Lights-Out-Management System

Network LAN or WAN

Dedicated LOM Network Port for Out-Of-Band Appliance Management

- Site-1 (New York, USA)
- Site-2 (Los Angeles, USA)
- Site-3 (London, UK)
- Site-4 (Singapore)

Centralized Remote Management Console

Provides Experience as "You were sitting in front of it"

LOM operates independently from server's CPU and operating system (OS), provides appliance access even if the CPU or OS is locked up or otherwise inaccessible

LOM Manager: nAppliance Integrated Lights-Out-Management

Remote Appliance Hardware Access Features:
- ✓ Web based iKVM (Keyboard, VGA and Mouse) access
- ✓ System BIOS-level access
- ✓ Complete remote power control access:
  IPMI v2.0 compliant. Provides remote management when system is operational, dead or in power standby
  - OS Level Control: Shutdown, Reboot and Power Cycle
  - Chassis Switch Level: Reset, Power Down, Power Up, Power Cycle

Remote Appliance System Management via ARRMS(TM) Console
- ✓ Full access to nAppliance's "Appliance Recovery & Remote Management Systems". Easy Network Port and Shares accessiblity, Sytem Image PiT Recovery, Backup/Restore, Factory Reset and Bare-Metal Recovery
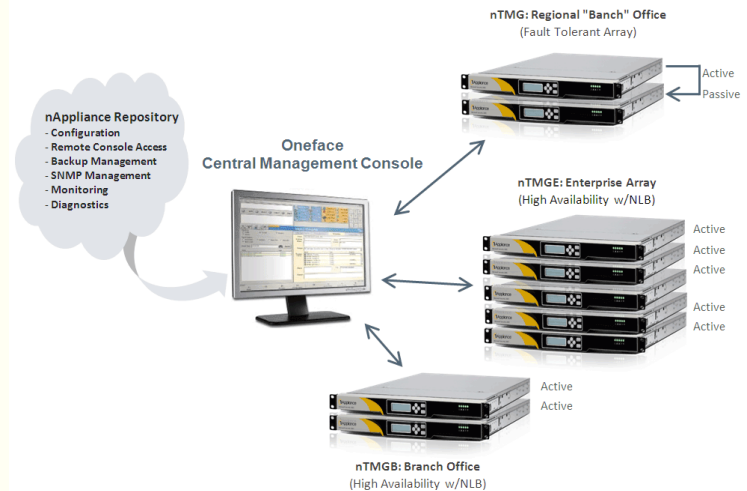- ✓ System Health: CPU, Fans, PS, LAN ports status monitoring

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nAppliance NETWORKS — Appliance Recovery & Remote Managment System (ARRMS)
System Maintenance, Image Recovery and Remote Management Tools

System Info	Network Config	Network Shares	LOM: IPMI Port	Help
Command Prompt	HW Diagnostic Tools	License Info	Updates	Reboot	Shutdown	Exit

Quick Recovery — Quick System Recovery: One-Click "Roll-back" of Appliance Image to "last known good Point-in-Time (PiT) Snapshot". System Recovers automaticaly from last online PiT Snapshot

Repair Recovery — System Repair Recovery: Roll-back Appliance Image to an earlier Point-in-Time (PiT) Snapshot. By default system saves up to 10 weekly PiT Snapshots. Admins can configure the frequency manually

Complete Backup — Comlete System Backup: Back complete Appliance Image to a Local or Network Drive Share. Admins can store multiple "Good-Known" backup copies

Quick Restore — Quick System Restore: One-Click Restore of complete Appliance Image from last-known-good system backup from local drive.

Complete Restore — Complete System Restore: Restore complete Appliance Image from a Local or Network based backup image

Quick Factory Restore — Quick Factory Default Restore: One-Click Restore of complete Appliance Image to "Factory Default"

Bare Metal Restore — Bare-Metal System Restore and Upgrade: Restore complete Appliance Image to "Factory Default" or "Factory Upgrade" from a USB CD-ROM or USB Flash drive on to a raw hard disk drive

Boot Source: Drive-USB   Appliance Model: NTMG-2500E   Appliance S/N: IS-09234226   Software (Ver: 2.01 Build: 301)

Features and Benefits

nAppliance Oneface Integrated Management Environment

nAppliance Repository
- Configuration
- Remote Console Access
- Backup Management
- SNMP Management
- Monitoring
- Diagnostics

Oneface Central Management Console

nTMG: Regional "Banch" Office (Fault Tolerant Array) — Active / Passive

nTMGE: Enterprise Array (High Availability w/NLB) — Active / Active / Active / Active / Active

Active / Active

nTMGB: Branch Office (High Availability w/NLB)

Oneface Appliance System Manager

Data The nAppliance nUAG 3500U is an enterprise grade, comprehensive, secure remote access management gateway appliance based on embedded version of Microsoft Forefront Unified Access Gateway 2010 Data The nAppliance nUAG 3500U is an enterprise grade, comprehensive, secure remote access management gateway appliance based on embedded version of Microsoft Forefront Unified Access Gateway 2010

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